The Oil and Gas Journal

PRODUCING REFINING ENGINEERING MARKETING

VOL. 28. NO. 52. TULSA, OKLAHOMA, MAY 15, 1930

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TABLE OF CONTENTS

SPECIAL ARTICLES

Crisis in Production Situation 35
By James McIntyre
California, Mid-Continent and Pennsylvania operators hold councils to avert disaster.

Plan Gas Pipe Line to Atlantic Coast 37
By A. E. Mockler
Large industrial centers to be supplied with mixture of natural gas and manufactured fuel. Will affect refining operations.

Sarepta District Getting Attention 38
By D. H. Bancroft
Webster Parish attracts interest in deeper drilling.

Gas Industry in Marvelous Expansion 38
By Thomas F. Smiley
Reports and discussions at New Orleans convention show methods of production and transportation undergoing great changes.

Gasoline Manufacturers to Convene 39
Ninth annual meeting to be held in Tulsa May 20-22.

Vapor Pressure and Distillate Data 40-41
By R. C. Alden and M. J. Blair
Correlate Reid method and natural gasoline hydrocarbon content of motor fuel.

Use of Magnetometer in South Texas 42
By L. Spraragen
Erroneous impression that it can be of no assistance in that section.

A Disappointment and a Suggestion (Editorial) 44

Vapor Recovery and Fire Prevention 46
By H. R. Linhoff
New system for gathering waste and dangerous vapors.

Final Program for A.P.I. Production Division 48

Pipe Line Construction News 68

Field Problems and Their Solution 99
Edited by Thomas F. Smiley

Among the Field Workers (Photographs) 100

Twelve Months' Production Declines 140
By James McIntyre

FIELD OPERATIONS

Late Fields 50

Oklahoma 50
By W. A. Spinney

Kansas 52
By W. A. Spinney

Southwest Texas 54
By B. D. Stevenson

North Louisiana-Arkansas 56
By D. H. Bancroft

Gulf Coast 57
By Neil Williams

Rocky Mountain Area 58
By Tolbert R. Ingram

Canada 58
By Victor Lauriston

California 60
By L. P. Stockman

Michigan 62
By Special Correspondent

West Texas 65-152
By L. E. Bredberg

North Texas and Panhandle 66-152
By L. E. Bredberg

Eastern Fields 76
By D. S. Wakenight

Kentucky-Tennessee 76
By Whit

Central West 80
By Whit

REFINING AND MARKETING

Oklahoma Spot Market Continues Dull 36
By C. O. Willson
Gasoline prices sag when demand fails to improve. Trade generally expects recovery in future.

Technical Questions Answered 96
By Dr. C. K. Francis

Spot Market Quiet in Chicago 126
By J. B. Waldo

Tank Car Advance Helps East 127
By A. E. Mockler

Natural Gasoline Manufacture 129

Brief Items for Petroleum Refiners 130

Refinery and Crude Prices 132-133

Tank Wagon Quotations 134

Of Interest to Sales Departments 146

ARTICLES OF GENERAL INTEREST

The Advertisers' Index 33

Men Known in Oildom and Personals 84

Natural Gas Developments 87

Equipment and Supplies 90-92

Classified Want Advertisements 124-125-126

Oil Securities Market 136-137

Field Operations in April 168

Crude Petroleum Statistics 176

BE A REGULAR READER

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Beginning at once, mail The Oil and Gas Journal to me every week for one year. Enclosed find $6.00.

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- ☐ Refining
- ☐ Natural Gasoline Manufacturing
- ☐ Pipe Line
- ☐ Equipment

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Company _____
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Refinery Section Starts on Page 126

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City _____
State _____

Refinery Section Starts on Page 126

Crisis Seen in Production Situation

Highest daily average estimated total production in 1929, week ended Aug. 24, 2,975,435 bbls. Lowest in 1929, Dec. 27, 2,595,320 bbls.

California, Mid-Continent and Pennsylvania Operators Hold Councils to Avert Disaster

By James McIntyre

Highest daily average estimated light oil production in 1929, week ended Sept. 14, 2,534,524 bbls. Lowest in 1929, Apr. 13, 2,142,036 bbls.

The producing industry in the past week found it necessary to cope with a serious situation—or rather a number of such situations. In the northern Pennsylvania Field, the Mid-Continent and in California, meetings were held, the purpose of which was to avert possible cuts in the price of crude oil caused by overproduction in fact or threatened overproduction.

A meeting was held in Bradford, Pa., Monday at which a committee was appointed which will work with a committee to be appointed by Allegany Field operators to reduce production of Pennsylvania Grade oil in their fields to market requirements. At a meeting held in Los Angeles, operators who have refused to ratify the extension of curtailment of production in Long Beach and Santa Fe Springs were given until May 15 to get into line to avert possible reductions in the crude market. The general committee on proration in Oklahoma on Monday found itself up against some dissatisfied operators in the Oklahoma City Field who desire that more crude be taken from that field, and a conference is scheduled for May 29 with the Oklahoma City operators, while in the interim strong efforts will be made to maintain the unity that has prevailed for some time among Oklahoma producers.

It is a critical time which calls for coolness and wisdom in the face of the steadily rising production, which is now within 40,000 barrels a day of the production in the same week last year.

It was one year ago that the tremendous upswing of production began, ending with an average of 2,975,435 barrels per day the week of August 24. It is to avert a recurrence of this senseless policy that councils have been held in the various producing divisions in the past week.

The increase in production last week came principally from Southwest Texas where Darst Creek reported a new peak output.

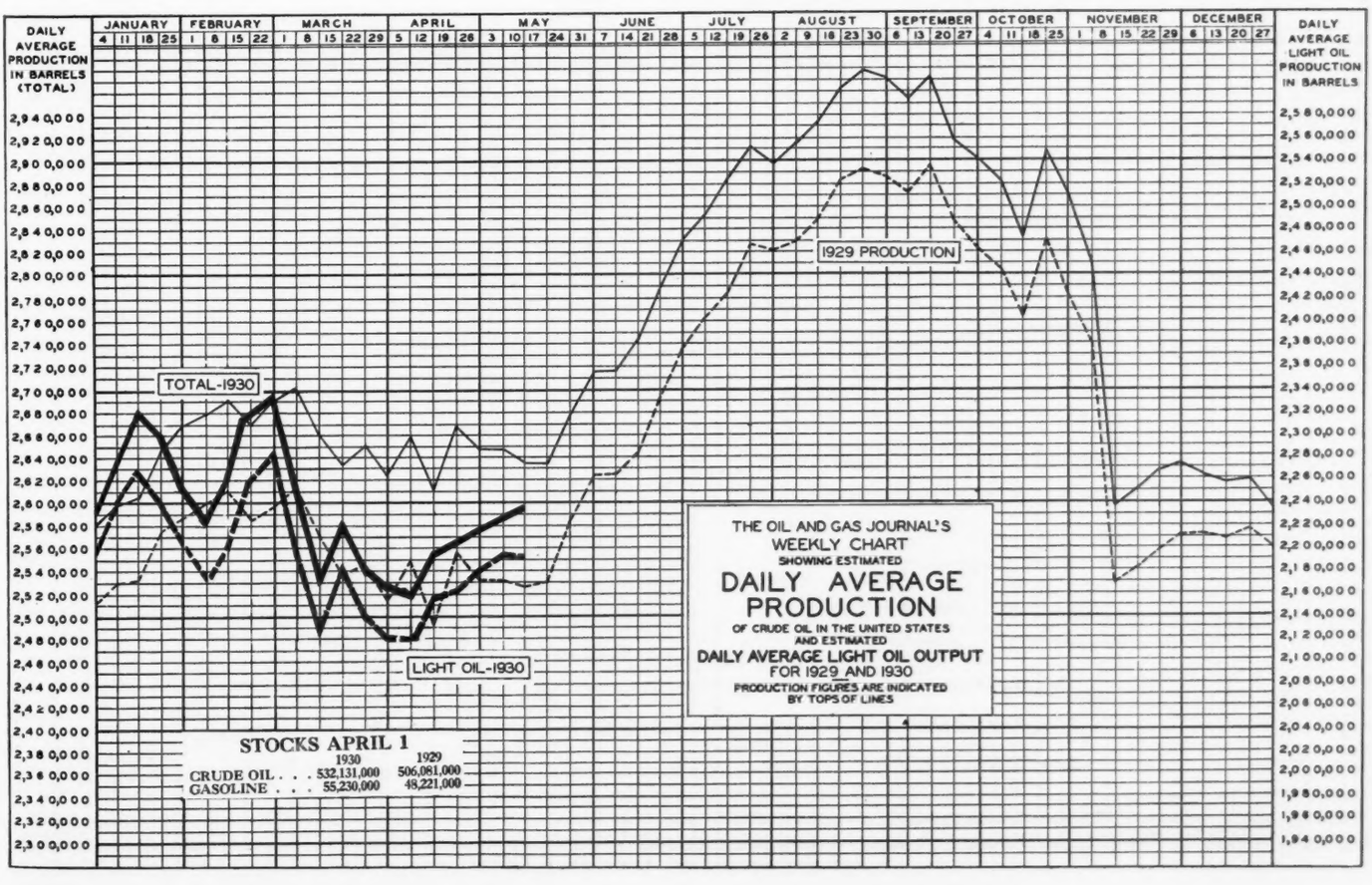
The gasoline marketing situation is anything but good owing to recent unfavorable weather, and this has affected the refiners' market, which, taken with the critical crude production situation, acts as a warning to avoid rocking the boat.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended May 10, 1930, and a comparison with the previous week follows:

	May 10		May 3	
	Light	Heavy	Light	Heavy
Oklahoma—				
Oklahoma City	113,225	.....	116,420	.....
St. Louis-Pearson	44,410	.....	37,220	.....
Seminole	195,535	.....	211,090	.....
Northern miscellaneous	242,115	.....	237,090	.....
Southern fields	57,350	.....	56,150	.....
Total Oklahoma	652,635	.....	657,970	.....
West Texas—				
Hendricks	78,395	.....	79,191	.....
Yates	119,435	.....	120,126	.....
Remainder	119,943	.....	119,622	.....
Total West Texas	317,773	.....	318,939	.....
North Louisiana	35,750	5,380	35,685	5,200
Arkansas	17,625	40,225	17,815	40,245
North Central Texas	140,300	.....	138,574	.....
Texas Panhandle	103,498	.....	103,379	.....
East Central Texas	39,000	.....	37,197	.....
Kansas	127,870	.....	125,130	.....
Total Mid-Continent area	1,433,451	45,605	1,434,689	45,445
Gulf Coast	.....	200,088	.....	198,336
Southwest Texas	.....	70,579	.....	62,436
Eastern	140,000	.....	140,000	.....
Rocky Mountain area	72,968	.....	77,624	.....
California—				
Santa Fe Springs	134,000	.....	132,500	.....
Long Beach	99,750	.....	99,000	.....
Huntington Beach	28,250	.....	28,500	.....
Elwood	45,500	.....	47,750	.....
Ventura Avenue	48,750	.....	48,000	.....
Seal Beach	23,500	.....	23,750	.....
Remainder of State	170,000	85,000	165,000	86,000
Total California	549,750	85,000	544,500	86,000
Total United States	2,196,169	401,272	2,196,813	392,217
Grand total	2,597,441		2,589,030	

Total Increase, 8,411 Bbls.; Light Oil Decrease, 644 Bbls.



Oklahoma Spot Market Continues Dull

Gasoline Prices Sag When Demand Fails to Improve. Trade Generally Expects Recovery in the Near Future

By C. O. Willson

The Oklahoma (Group 3) refinery market over the past week continued sluggish in practically all products. Some of the refiners noted an improvement the first of the week in orders on jobber contracts and in shipments to their own stations but this increased business had not been reflected in a stronger spot market.

Refiners who depend on spot sales to move the bulk of their gasoline output and who are not in a position to store excess production were forced to give concessions to secure prompt shipments. Sales of U. S. Motor gasoline have been made under 7 cents again although 7 to 7½ cents continues to be the general price range on this grade to the trade. Oklahoma sellers reported cheap material coming from at least two Middle West refiners and from several scattered plants in other Mid-Continent refining areas. Concessions were obtainable in all grades of gasoline and naphtha.

No improvement was apparent in other refinery products. Fuel oils, particularly the low gravity industrial grades, continue weak. High cold test material is dominating this market in North Texas, Kansas, Oklahoma and Middle West points. The high cold test grades are of minor importance during the cold season because the trade expects price differentials of from 10 to 20 cents a barrel under the low cold test grades for northern shipment. Now, however, the relatively few industrial buyers are willing to take the high cold test material and the entire market has slumped to lower levels.

The higher gravity fuel oils and the better grades of distillate and gas oils are in a better position. The activity of buyers in soliciting contracts for oils suitable for furnace fuel in homes, office buildings, hotels, apartments and similar buildings, assures a large consumption of these oils in the new season which starts in the fall. The desirability of this fraction of the crude oil as charging stock for cracking units and the fact that many refiners feel that the prices received last year for furnace oils were unsatisfactory, indicates that the supply the coming season will be more limited than in the past. Most buyers are particular as to specifications requiring a low flash, zero cold test, good odor and color and a low sulphur content.

Most of the refiners find it difficult to meet one or more of these specifications and several have announced their intention of making as little as possible. In a few cases at least they are refusing to consider the usual contract which is based on published quotation on date of shipment with maximum guarantees to the buyer.

Kerosene continues to be a "weak sister." One large Oklahoma refiner reduced its price from 4½ to 4¼ cents for the 41-43 water white grade. Several sales were made over the week at 4⅛ cents and sales over the month were made as low as 4 cents. Natural gasolines are also easier than they were a week ago with prices one-fourth cent lower on the B, BB and C grades.

Refiners Optimistic

Although the reaction from the April advance in gasoline prices has extended longer than expected, the writer has found that most of the sellers and buyers are optimistically expecting a recovery within the next 15 to 30 days. Several have taken the position that the dull market of the past three weeks should be intercepted as favorable from the standpoint of the coming summer market. They point out that undue optimism in April and May with a constantly advancing market in the past has brought a premature increase in crude runs to stills and enlarged gasoline output which resulted in reaction in prices starting in June and extending through the summer and fall months. A check of prices over the past 10 years in the Mid-Continent tank car market will show that this trend has been the rule rather than the exception.

From the consuming end weather conditions in April and May are so erratic that the week-to-week demand varies and there is tendency to overemphasize the importance of temporary declines. With the arrival of June the weather becomes more stable so far as motoring is concerned and with the start of the tourist

(Continued on Page 139)

REFINED MARKET BAROMETER

An advance in eastern tank car prices was the principal development of the past week in the motor fuel market. Prices are now at the highest point of the year in that area. In some of the other refining areas gasoline prices showed tendency to sag from the levels established earlier in the month. Natural gasolines were unsettled both in California and the Mid-Continent. Kerosenes except in small areas are inactive and prices were lowered at several points during the week. The fuel oil situation has not improved at interior points where the industrial demand has declined. The gas oil demand is also less. The demand for Diesel oils is increasing steadily in several refining areas. No general trends are apparent in the lubricating oils, the supplies being adequate to take care of the increased motor oil demand. Wax prices continue to reflect an inactive market.

Mid-Continent—Most products sluggish. Prices sag on refinery gasolines. Kerosenes also weak. Industrial demand for fuel oil slow and prices lower. Gas oil and distillate steady. Natural gasolines unsettled. No change in other products.

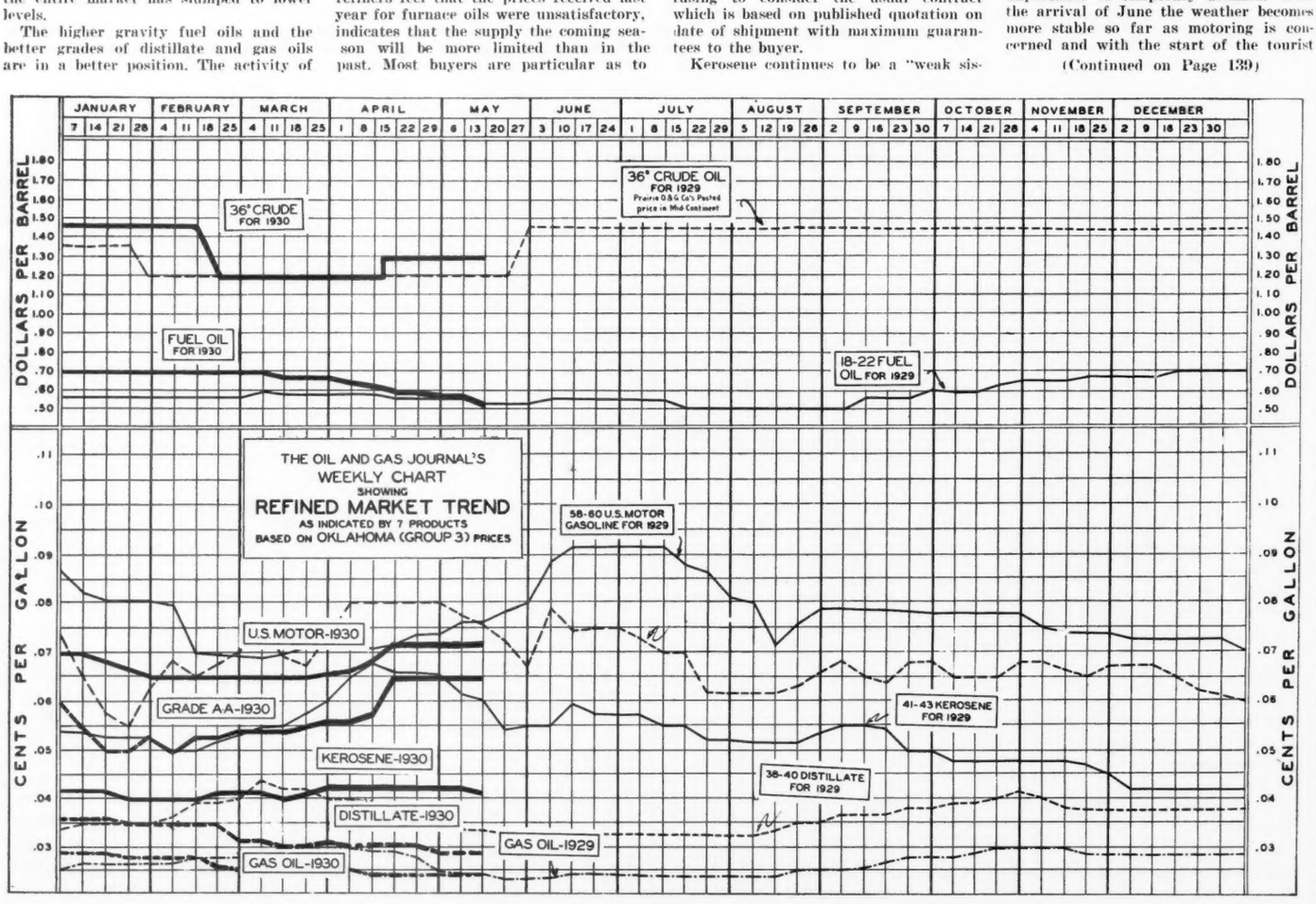
East Coast—Largest refiner advances U. S. Motor gasoline to level established earlier in the month by other companies. Lower kerosene prices expected. Fuel oil steady. Diesel oil in strong demand. No change in lubricants or wax.

Pennsylvania—Several grades of refinery gasoline higher. No change in other products with fair demand for neutral oils and bright stocks.

Gulf Coast—More fuel oil available and prices recede from recent high levels. Gasoline firm. Fair movement of neutral oils.

Chicago—Spot gasoline demand slow and prices lower. Kerosene sluggish. Supplies of fuel oil more than adequate and prices lower.

California—No improvement in local gasoline prices with price cutting general in retail market. No change in other products.



Plan Gas Pipe Line to Atlantic Coast

Large Industrial Centers to Be Supplied With Mixture of Natural and Manufactured Fuel. Will Affect Refining Operations

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, May 12.—Construction of a gas pipe line to serve the New York industrial area, with eventual expansion for the furnishing of domestic demand in New York City, has been brought closer by the reported decision of Columbia Gas & Electric Corp. to construct a pipe line from Morgantown, W. Va., to Philadelphia. The Philadelphia line, it is indicated, will be later extended to Harrison, N. J., just across the river from New York City, and will take in Trenton and other New Jersey industrial centers besides furnishing gas for distribution in the metropolitan area.

While officials of the Columbia system have made no official announcement with regard to the new line, it is reported that the company's field force has completed an extensive survey of pipe line routes into Philadelphia and that the important manufacturing sections of New Jersey have also been mapped for consideration of executives. The company's research activities, it is reported, have also taken in the compilation of estimates of potential gas consumption in the areas affected.

According to reports concerning the proposed new pipe line, the main line of the system will start at or near Morgantown, W. Va., and will be built into Philadelphia, thence extending northward through Trenton to Harrison, N. J., just aside of Newark, with branch lines of the network to be constructed into important consuming centers along the main line.

Columbia Gas & Electric Corp. has long been credited with plans for piping gas into large consuming areas on the North Atlantic Seaboard, and while officials of the company have conceded that such a development might be logical, and have indicated that it was under consideration by the executives of the corporation, no announcement of actual plans has been made, and it is not believed that such announcement will be forthcoming until the company has had the opportunity of purchasing the necessary properties and rights of way for the line and its pumping stations and terminals.

Bought Old Oil Line

The company during the past two years has purchased several unused sections of old oil pipe line systems in sections of the East indicating an ultimate intention to pipe gas into New York City, and at the present time holds pipe line properties within striking distance of the metropolis.

Columbia Gas & Electric is ideally situated for a development such as the one now reported. The corporation and its subsidiary companies own important gas reserves in Pennsylvania, Kentucky, Ohio, West Virginia and New York. Aggregate property so held is estimated at close to 6,000,000 acres. While definite data is lacking on the potential gas production of this acreage, it is reported that Columbia's present large natural gas production is being obtained from less than 20 per cent of the total acreage controlled, indicating a substantial reserve for future expansion in marketing.

Reports in financial circles in connection with the projected line for New York indicate that this line will be part of a general network hooking up the Atlantic Seaboard, with the line to take in important consuming centers from Virginia to New York. United Gas Improvement Co., it is believed, will form a part of the distributing system for the new pipe line network, marketing natural gas through its numerous subsidiaries in eastern seaboard states.

Reports from Clarksburg, W. Va., this week state that the Midland Natural Gas Co. of Dover, Del., has been authorized to do business in West Virginia. The Midland company has already purchased natural gas production aggregating 6,500,000 feet daily, taking over, among others, properties of R. S. Monroe and the Shannon Run, Aizpura, Bridgeport, Garrett-Lyons, Hampton, Carsor, Ogden, Gilmer, Aetna and Clay district companies. The Midland Natural Gas Co., it is reported, is a subsidiary of Columbia Gas & Electric, and will move the gas from the properties which it has acquired to the eastern seaboard through

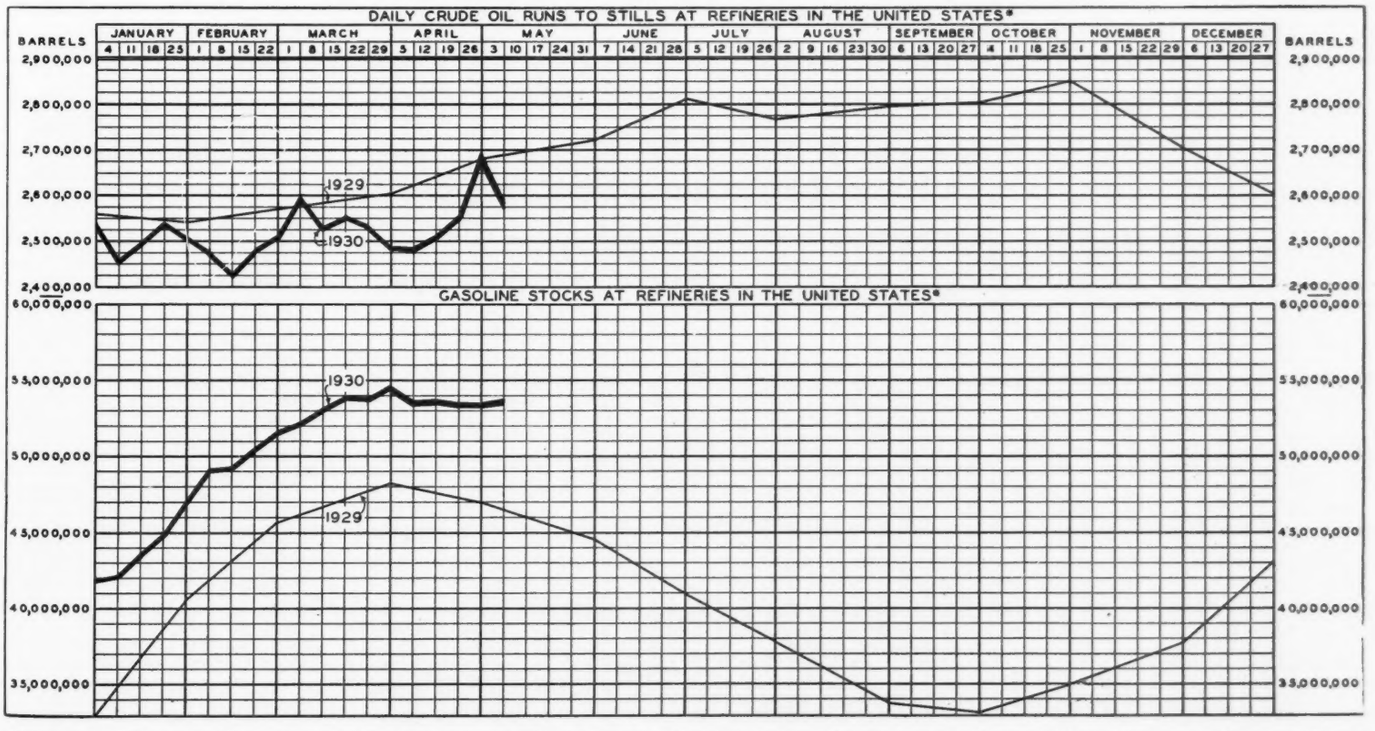
(Continued on Page 143)

AMERICAN PETROLEUM INSTITUTE WEEKLY REFINERY STATISTICS

The weekly report made to the American Petroleum Institute on refinery statistics—crude runs to stills, gasoline stocks and gas and fuel oil stocks in barrels—for the week ended May 10:

	Week ending May 10				Week ending May 3				Week ending January 4			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	475,285	9,246,000	6,906,000	100.0	495,814	9,621,000	6,679,000	100.0	454,857	5,998,000	7,431,000
Appalachian	89.1	91,571	1,788,000	760,000	91.0	88,329	1,829,000	762,000	91.6	75,571	1,282,000	805,000
Indiana, Illinois, Kenutcky	99.5	334,857	8,553,000	3,751,000	99.5	323,614	8,589,000	3,626,000	98.6	289,800	5,483,000	3,505,000
Oklahoma, Kansas, Missouri	89.1	303,857	4,455,000	4,183,000	89.1	301,829	4,399,000	4,123,000	87.7	263,428	3,604,000	3,277,000
Texas	90.8	630,428	7,942,000	10,132,000	90.8	552,787	8,025,000	9,624,000	90.7	539,857	6,590,000	13,757,000
Louisiana and Arkansas	96.8	171,285	2,615,000	1,985,000	96.8	167,100	2,664,000	1,942,000	96.8	160,000	2,161,000	4,499,000
Rocky Mountain	93.6	59,285	2,743,000	1,083,000	93.6	56,929	2,817,000	1,097,000	93.3	41,614	2,273,000	973,000
California	99.3	595,711	15,861,000	108,149,000	99.3	595,529	15,882,000	108,162,000	99.3	642,857	14,826,000	109,770,000
Total United States	95.6	2,660,306	53,203,000	136,949,000	95.6	2,581,931	53,826,000	136,015,000	95.4	2,468,285	42,217,000	144,017,000
Texas Gulf Coast	100.0	178,571	6,725,000	7,113,000	100.0	423,800	6,948,000	6,984,000	100.0	429,585	5,579,000	10,792,000
Louisiana Gulf Coast	100.0	117,428	2,221,000	1,111,000	100.0	109,328	2,282,000	1,065,000	100.0	108,514	1,877,000	3,818,000

(1) Per cent refinery capacity represented. (2) Daily crude runs to stills. (3) Gasoline stocks. (4) Gas and fuel oil stocks.



Data for 1930 based on weekly reports of the American Petroleum Institute. Data for 1929 derived from monthly reports of the Bureau of Mines, Department of Commerce. Figures for last week not shown in graph but are included in above tables.

Gas Industry in Marvelous Expansion

Reports and Discussions at New Orleans Convention Show Methods of Production and Transportation Undergoing Great Changes

By Thomas F. Smiley

The May convention of the Natural Gas Department of the American Gas Association, held last week in New Orleans, La., will go down in the history of the organization as distinctly important and satisfying in the quality of the papers presented, the practical discussions inspired by them, the interest manifested by delegates, the gratifying attendance at the various sessions and above all perhaps the evidence of marvelous progress in the natural gas industry as shown in reports of work accomplished or under way. The smooth running of the entire convention, which began Monday morning and ended at noon on Thursday, was in itself a tribute to the careful work performed by E. J. Stephany, secretary, and the various committees charged with details of arrangements.

The registration of about 700 met expectations and was regarded as excellent in view of the fact that there were no exhibitions of natural gas equipment, a feature which attracted hundreds to the 1928 and 1929 conventions. Henry C. Morris, president and general manager of the Dallas Gas Co. and chairman of the Natural Gas Department, expressed himself as greatly pleased with the convention. "The sessions were as well attended as any in the history of the association and that more interest was felt in the deliberations than ever before was indicated by the number and character of the questions from the floor and by the close attention paid to the papers," said Mr. Morris. "This is bound to result in great benefit to the companies that had representatives in attendance. As indicating the value of our committee work it is safe to say that the results obtained by the Main Technical and Research Committee, of which H. C. Cooper of Pittsburgh is chairman, has made possible in a great measure our present long-distance pipe lines. The information and technical data developed by the organization in the last year contributed greatly to the welfare of both the companies and the public."

Report on Orifice Meters

Announcement by Mr. Cooper as chairman of the Main Technical and Research Committee that a report on the work of the Gas Measurement Sub-Committee, covering the use of orifice meters for measuring gas, would be ready within a few weeks was received with special interest. F. M. Towl, New York, is chairman of the Gas Measurement Sub-Committee; M. E. Bensch, Chicago, co-chairman, and T. R. Weymouth, Tulsa, acting chairman. The other members are Dr. R. P. Anderson, New York; H. S. Bean, of the Bureau of Standards, Washington, D. C.; E. O. Bennett, Ponca City, Okla.; Dr. Edgar Buckingham, Washington, D. C.; E. A. Clark, Charleston, W. Va.; H. D. Hancock, New York; T. H. Kerr, Columbus, Ohio, and William Moeller, Jr., Los Angeles, Calif. The result of the research and experimental work performed by this sub-committee is recognized as being of unusual value. Mr. Cooper said:

"The Gas Measurement Sub-Committee held a meeting in St. Louis last April 14 and there made plans covering the details and scope of its first report.

"The final draft of this first report is now being made by a small sub-committee, which draft will be finally corrected and approved by the committee, and will be submitted to the board of directors of the department at its spring meeting, the latter part of this current month, for its acceptance. Upon acceptance, the report will be printed at once in pamphlet form for use in the industry.

"The report represents the present status of the committee's work which has continued over the past five years and covered many experiments and tests and all necessary research. The report will cover the committee's views and recommendations concerning the use of specific forms of orifice meters which have been studied."

To Aid in Educating Engineers

The increasing tendency to commit solution of the natural gas industry's problems to hands especially trained for them through broad scientific education was observable not only in the high commendation accorded the Main Technical and Research Committee's work and the confidence reposed in conclusions reached by that committee, but in action taken by the committee on Supply Men's Fund, which reported its adoption of a plan by which young men will be aided in preparing themselves for engineering and research work.

When the Natural Gas Supply Men, Inc., gave up its existence in 1927 invested funds amounting to $17,000 were turned over to the American Gas Association with the stipulation that the income be used for educational purposes. The old Natural Gas Association of America had funds amounting to $10,000 invested in Liberty Loan bonds, and these also were turned over to the association to be used as determined by the Natural Gas Department. The committee on Natural Gas Supply Men's Fund was appointed by action of the executive board June 1, 1928. This committee was charged with the responsibility of deciding upon the best means of applying the available income from the fund to educational purposes. Its members are John B. Tonkin, Pittsburgh, Pa., vice president and general manager of the Peoples Natural Gas Co., chairman; J. D. Creveling, New York, head of the natural gas department of Henry L. Doherty & Co., and Samuel W. Meals, Pittsburgh, president of the Carnegie Natural Gas Co. In its report the committee said:

"Your committee has had several meetings and has corresponded at length with various schools in different parts of the country. We have sought the advice of college presidents, university graduates, and plain gas men. We have considered undergraduate aid and postgraduate research. We have studied the advantages of scholarships, loan funds and fellowships. We have investigated the facilities, the curricula, the staff and the interest shown by colleges and universities. As a result we have arrived at certain definite conclusions.

Technical Graduates Needed

"The natural gas industry is in need of technical graduates who have studied those subjects most applicable to the problems of our industry and who have had some experience or contact with our operations. Our universities, generally speaking, lack the funds required to promote research into natural gas subjects or to aid those worthy students who would like to spend more time in natural gas research, but who cannot afford to invest more of their own money in further study and research after their graduation. Our educational fund fits happily into this picture.

"While we are of the opinion that the greatest good can be accomplished by graduate aid through research fellowships, it may be necessary to give assistance to worthy juniors and seniors which will help them to graduate from the regular engineering courses and then to undertake the special research work.

"In order to obtain the greatest and

(Continued on Page 142)

Sarepta District Getting Attention

Webster Parish Well Attracts Interest in Field Where Deeper Drilling Possibilities Are Being Considered

By D. H. Bancroft

SHREVEPORT, La., May 12.—A well flowing an estimated 350 to 500 bbls. of fluid 50 per cent water with 5,000,000 feet of gas and some salt water has directed attention to the Sarepta district of Webster Parish, 8 to 10 miles northwest of Cotton Valley production. In the attention that has been given the greater activity in Carterville and Zwolle districts during the past few months what has been going on in Sarepta has been rather overlooked, though the field has figured in pipe line run figures for over a year and is by no means a new field but its potentialities have not yet been thoroughly demonstrated. Now that Carterville and Zwolle both are beginning to puncture their novelty with succeeding dry holes Sarepta is rising to take their place. The well is Merrick Oil Corp.'s (formerly S. H. Riggs and associates') No. 1 Slack, in the SE cor. SW SE, Section 35-23-11, and it is flowing through 3-inch tubing from 2 feet of sand, total depth 2,742 feet.

Geographically the field appears to be an extension of the Carterville Field to the northwest, in Bossier Parish, with which it is associated in pipe line run figures, but structurally it is of entirely separate identity and produces a different grade of oil. Carterville production comes from 3,200 feet whereas Sarepta's is from around 2,700 feet. However, operators are considering the possibilities of deeper production and tests to determine whether it exists will probably be undertaken in the not distant future. Thus, with its background of early development as a gas field, Sarepta will more or less duplicate Carterville's experience in coming back as an oil-producing area.

Deeper Possibilities

This possibility of a second deeper producing horizon is touched upon in a recent report on the geology of Sarepta by Dr. A. F. Crider, formerly geologist for the Dixie Oil Co., and other interests. Accompanying his report is a subsurface map of Township 23, Ranges 9, 10 and 11, which includes the old Shongaloo or Munn gas structure which is separated by a saddle from the Spring Hill or Sarepta, high on the line between Ranges 10 and 11. Development of the Shongaloo area coincident with and immediately following the flush days of Haynesville led to Cotton Valley and has been drilled intermittently since. It was producing commercial gas long before Cotton Valley and beside fueling Haynesville drilling operations also supplied several small communities in that part of the country and eventually contributed a small part of Shreveport's supply. S. C. Fullilove drilled the discovery well in Shongaloo and also pioneered in Sarepta but Lloyd Harris, a Canadian from Toronto, got the first oil in what is now the Sarepta district.

Concerning Sarepta Doctor Crider's report states: "The Spring Hill area is a separate structure which has heretofore been contoured by the Conservation Commission, and by some of the local geologists, as an east plunging nose off the Carterville Field, but the evidence from well logs now shows a syncline separating the Carterville Field from the Spring Hill 'high'.

"Only the extreme southern and southwestern parts of the Spring Hill high have been drilled, and in both of these oil has been found in the Haynesville horizon, while the higher part of the structure to the north and northeast has never been drilled. The Haynesville sand is well developed in this area (south and southwest) and a number of wells are producing from this horizon.

"In the northwest quarter of Section 2-22-11 Magnolia Petroleum Co. found the Carterville sand at around 3,100 feet and went into it 42 feet. This horizon offers excellent possibilities in the southeast sections of Township 23, Range 11, and is yet to be thoroughly tested.

"Wells on the southwest edge of the Spring Hill structure are now producing with possibilities of better production from the same sand on top of the structure, and possibilities that the Carterville sand will prove productive as well as the deeper producing horizons found in Cotton Valley."

Sixty Wells Completed

Since 1923 when Magnolia Petroleum Co. began systematic development of the area as a gas field 60 wells have been completed, 14 of them producers with a total initial production of 1,167 bbls., and 32 gas wells with a total open flow of 856,000,000 feet per day. Fourteen were failures. At this writing seven wells, exclusive of the Riggs well, are producing an average of around 500 bbls. net oil and pipe line runs from the Sarepta-Carterville area have totaled 312,262 bbls. Sarepta first appeared in pipe line figures in February, 1929, after Magnolia had completed a 150-bbl. well on the Cook land in Section 2-22-11 the previous September, followed not long after by a 35-bbl. producer for the Northwest Louisiana Gas Co. which, like the Magnolia, had a gas line into the field. The latter was on the Pine Woods Lumber Co. land in Section 33-23-11. This well, completed at 3,041, gave the first suggestion of commercial production at lower depths.

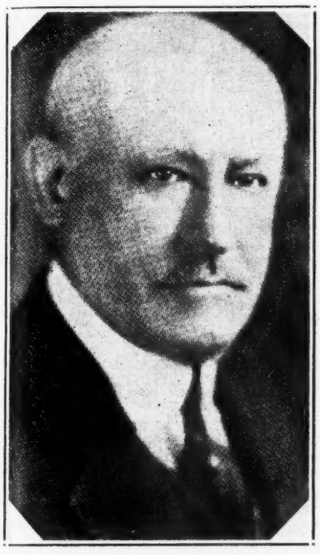
As stated, development recently in Sarepta has been marked by an occasional completion which, lacking any particularly spectacular features, failed to attract the attention its potentialities seem to warrent, but a check shows 11 operations under way at present with one operator reported having 11 tests in prospect on one 60-acre tract. As most of the operations actually under way or planned will require offsets and these in turn still others, the coming summer looks like a busy one for the field, and should drilling higher on structure produce much bigger wells they, with the

(Continued on Page 142)

Gasoline Manufacturers to Convene

Ninth Annual Meeting to Be Held in Tulsa May 20, 21 and 22. Varied Program With Wednesday as Refiners Day

Several hundred men connected with the various phases of the natural gasoline industry will assemble in Tulsa, May 20, 21 and 22, to attend the ninth annual meeting of the Natural Gasoline Association of America which will be held at the Mayo Hotel. Although most of those in attendance will come from Mid-



F. L. Chase

Vice President, Lone Star Gas Co., who will open convention with welcoming address.

Continent fields reports received by the association's headquarters show California and points east of the Mississippi River will be well represented at the convention which has become the national meeting of the year for natural gasoline manufacturers.

The convention this year will follow

M. F. Waters

Hanlon & Waters, Inc., President of the Natural Gasoline Supply Men's Association.

many of the traditional customs of the past. Frank L. Chase, vice president of the Lone Star Gas Co., Dallas, Tex., who has been delivering the welcome address of the association to its membership and guests ever since the association was started will again be present on Tuesday morning, May 20, to start off the convention.

The morning session will be followed by the traditional Dutch lunch furnished by the Natural Gasoline Supply Men's Association. The supply men's association will also be hosts at lunches on Wednesday and Thursday. Evening entertainments furnished by the association include a stag smoker Tuesday evening and the annual dance Wednesday evening.

A feature of the stag smoker Tuesday night will be a special film prepared by the association showing the developments of the natural gasoline industry from hazardous days of 1915 to the present state of perfection in which it has become an important factor in the production of motor fuels and other products.

Technical Sessions

The greater part of the three-day convention will be devoted to technical sessions. The subject of specifications for the various grades of natural gasoline will form one of the most important matters for discussion. Under the auspices of the association committees have been actively considering new specifications for over a year. The report of the committee's findings to date with possible final recommendations will be made Tuesday afternoon.

In appreciation of the close association between the natural gasoline and refining industries Wednesday has been designated as "Refiners' Day." Problems in the utilization of natural gasoline from the refiners' viewpoint will be discussed. A special paper on sales problems will be presented Wednesday afternoon.

Special interest centers in the report of Dr. G. G. Brown of the University of Michigan who for a period of four years has headed the association's research work. Doctor Brown's reports ever since he became affiliated with the association have been one of the most interesting features of the program, largely devoted to ascertaining the value of natural gasoline in motor fuels.

Opportunity for discussion will be given following the presentation of each

Dr. E. R. Lederer

Vice President of the Texas Pacific Coal & Oil Co., President of the Natural Gasoline Association of America.

prepared paper. The association is especially anxious that refiners and natural gasoline manufacturers participate in the discussion of specifications. The association is now considering important changes in the present specifications for the several grades of natural gasoline.

NATURAL GASOLINE ASSOCIATION OF AMERICA

NINTH ANNUAL CONVENTION

May 20-22, 1930

MAYO HOTEL, TULSA

Tuesday, May 20

Registration: 8:30 to 10:30 a.m.

Opening Session 10:30 a.m.

Frank L. Chase, Lone Star Gas Co., chairman.
Welcoming address: Frank L. Chase.
President's address: Dr. E. R. Lederer, Texas Pacific Coal & Oil Co.
Appointment of nominating committee.
Report of active standing committees not elsewhere on program.

Noon

Dutch lunch, furnished by Natural Gasoline Supply Men's Association.

Afternoon Session 2 p.m.

W. Baker, Sinclair Oil & Gas Co., chairman.
"Specifications," G. M. Davidson, Empire Oil & Refining Co.
"Comparison of California and Mid-Continent Problems and Methods," A. J. Schlosser, Barnsdall Oil Co.
Discussion.

Evening

Stag smoker, furnished by Natural Gasoline Supply Men's Association.

Wednesday, May 21

Refiners' Day—The program for this day has been especially arranged to be of interest to refiners and blenders.

Morning Session 10 a.m.

W. A. Melton, Deep Rock Oil Corp., chairman.
"Blending Value of Natural Gasoline," E. W. Zublin, Texas Pacific Coal & Oil Co., S. S. Smith, Shell Petroleum Corp.
"Natural Gasoline Specifications from the Refiners Viewpoint," M. H. Nolan, Producers & Refiners Corp.
Discussion: R. B. High, Shell Petroleum Corp.
Annual meeting Natural Gasoline Supply Men's Association, 10 a.m., sixteenth floor, Mayo Hotel.

Noon

Dutch lunch, furnished by Natural Gasoline Men's Association.

Afternoon Session 2 p.m.

F. E. Rice, Phillips Petroleum Co., chairman.
Sales Paper: W. K. Warren, Warren Petroleum Co.
Discussion: D. E. Buchanan, Hanlon-Buchanan, Inc.
"Outage," Emby Kaye, Skelly Oil Co.
"Just Another Opinion," Isaiah Hale, safety superintendent, Santa Fe System.

Evening

6:30 Membership Dinner—Annual Meeting—Election of officers and directors.
9:00 Annual Dance, furnished by Natural Gasoline Supply Men's Association.

Thursday, May 22

Morning Session 10 a.m.

D. E. Buchanan, Hanlon-Buchanan, Inc., chairman.
Report of Research Program, Dr. George Granger Brown, Department of Chemical Engineering, University of Michigan.

Noon

Dutch lunch, furnished by Natural Gasoline Supply Men's Association.

Afternoon Session 2 p.m.

R. E. Beckley, Standard Gasoline Co., chairman.
Report of Gas Testing Committee: George P. Bunn, Phillips Petroleum Co.
"Aviation Fuel," R. C. Alden and Billy Parker, Phillips Petroleum Co.
Discussion: E. C. LeFevre, Empire Oil & Refining Co.
"Theory of Absorption," A. Kremser, Standard Gasoline Co.
Discussion: G. G. Oberfell, Phillips Petroleum Co.

Oklahoma City Oil Men Ask for Higher Production Limit

The general proration committee of the Mid-Continent Oil and Gas Association, of which C. C. Herndon is chairman, met Monday in Tulsa to discuss the proration policy in the Oklahoma City Field.

It was reported to the committee that Oklahoma City operators want a greater production allowance. They ask that the field be permitted to produce 160,000 bbls. a day. As the present pipe line capacity in the field is not more than 130,000 bbls. and as this will not be increased until the Sinclair Pipe Line Co.'s additional facilities in the field are complete, about June 1, the general committee could not recommend the allowance asked by the Oklahoma City producers.

However, the general committee will meet with the Oklahoma City operators on May 29, by which time it is expected that a general curtailment policy will have been reached which will give Oklahoma City a greater production allowance than it now has.

The Corporation Commission in its last order allowed the Oklahoma City Field to produce 25 per cent of potential, but this is greater than the pipe line capacity and greater than the pipe line demand and the figure as an average has never been reached.

Two other fields that threaten overproduction are South Earlsboro and Konawa, both in the general Seminole area. South Earlsboro has been cut to 33⅓ per cent of its potential and Konawa has been limited to 14,000 bbls. a day as a maximum, regardless of its potential.

Vapor Pressure and Distillation Data

Correlate Reid Method and Natural Gasoline Hydrocarbon Content in Motor Fuels With Engler Test

By R. C. Alden and M. Gage Blair
Research Dept. Phillips Petroleum Co.

The relationship described herewith has for its purpose the estimation of the Reid vapor pressure (in pounds per square inch absolute at 100° F.) of commercial motor fuels from the data of the A.S.T.M. Engler distillation.

An early report[1] of such a relationship has been previously published. This early relationship was based entirely on the 10 per cent temperature of the A.S.T.M. distillation and had as its chief purpose a comparison of several vapor pressure methods then under investigation. In the meantime the Reid vapor pressure method has been generally accepted as the most practicable of the numerous vapor pressure methods proposed. Moreover, it has been determined that the 10 per cent temperature of the A.S.T.M. Engler distillation does not provide a thoroughly accurate index of the Reid vapor pressure and, therefore, a correction factor must be applied. Chart 7 shows the relationship between the actual Reid vapor pressure and the 10 per cent evaporated temperature for the samples studied in this report. It is apparent that although the 10 per cent evaporated temperature is a rough index of the vapor pressure of motor fuels, it is not sufficiently accurate.

An attempt was made to apply a slope correction factor based on the distillation curve prior to the 10 per cent point but this was found to be unsatisfactory. The present method is based on the mutual relationship of the 10 per cent A.S.T.M. temperature and the slopes of the Engler curve before and after the 10 per cent temperature.

While this work has been in progress, the Bureau of Standards has done some excellent work in much the same direction[2]. In their work, another vapor pressure method, termed the "gas-free" vapor pressure method, has been used as a basis for comparison. The relationship established by the Bureau of Standards makes use of the 10 per cent A.S.T.M. temperature, applying a correction factor for the slope of the Engler distillation curve at the 10 per cent temperature. Vapor pressure values are given in terms of the gas-free vapor pressure, although in the latest report a comparison is made with results by the Reid method.

It is to be noted in all these relationships that the 10 per cent A.S.T.M. temperature used is the temperature when 10 per cent of the sample has been evaporated. In other words, the distillation curve is plotted with the loss on the front end and the temperature at the 10 per cent point is read from the resultant curve.

Vapor Pressure Chart

The result of work along the lines outlined above are crystallized in the two charts appearing on Chart 1. The right hand section of this chart is composed of three graduated lines plotted parallel to each other. The central line of this graph is the one from which the vapor pressure is read in pounds per square inch at 100° F. The outside lines, which are marked "A" and "B," are the correction factors in percentages of the total volume of the sample distilled. The spacing between the lines denotes the relative effect of the two factors on vapor pressure.

The left hand section of the plate is a plot of temperature values for the "A" and "B" factors, which are used as abscissae against the 10 per cent evaporated temperature as ordinate. The curves thus developed make it possible to determine the "A" and "B" factors from the A.S.T.M. distillation curve.

In application the first step is to evaluate the "A" and "B" factors for the gasoline in question. This is done by first accurately plotting, preferably on a large scale, the A.S.T.M. distillation, allowing for distillation loss on the front end of the curve. From this curve, the 10 per cent evaporated temperature is read. Locating the 10 per cent temperature, thus determined, on the ordinate scale of the two curves on the left hand portion of Chart 1, it becomes a very easy matter to determine the two A.S.T.M. temperatures which correspond to the given 10 per cent evaporated temperature. These temperatures are the A.S.T.M. distillation temperatures at which the percentages representing the "A" and "B" factors are evaporated in the A.S.T.M. distillation. With the finding of these percentages the final step in predicting vapor pressure is to apply them to their respective scales on the right hand section of Chart 1 and read the vapor pressure from the middle scale at the point of intersection of the vapor pressure scale with a line drawn between the "A" and "B" factors.

An example of the use of the graph is presented which will assist in clearing up the points which may be in doubt

TABLE 1—DATA CONCERNING REPRESENTATIVE MOTOR FUEL SAMPLES FROM 184 CONSIDERED

	A.S.T.M. distillation data*								Reid V.P.		Bridgeman	
Engler	First drop	5%	10%	20%	50%	90%	End-point	Loss	A.P.I.	Actual	Graphical	Slope†	V.P.
1218	114	153	170	192	242	321	390	0 4	63 8	4.6	4 5	2.85	4.9
1128	114	155	176	208	273	368	428	0 6	56.7	4 7	4.6	3 8	4 5
1100	105	136	161	196	265	369	418	2 0	58 7	5.7	6.4	4 1	5.7
1257	106	148	171	206	280	384	435	0.1	56 7	5 6	5.45	3 9	4 8
1103	97	122	139	161	227	382	434	1.1	55 3	6 9	7.7	2 7	8.0
1140	100	131	152	186	270	382	428	0 8	57.3	6 4	6.55	3.7	6.5
1308	102	139	163	201	277	375	421	1 3	54 7	6 0	6.05	4 3	5 6
1522	96	118	135	166	251	377	428	2 2	60.7	7 6	8.0	3 2	8.5
1116	92	122	141	175	246	367	428	0.8	60 9	7.0	7.5	3 6	7.8
1216	90	129	151	188	254	344	396	0 5	56 8	7 0	7.0	4 1	6 7
1253	96	134	163	202	273	376	426	0 5	55 5	7 1	6.9	5 0	5.6
1097	103	117	129	142	202	353	432	1 5	65.4	8 4	8.15	1.8	9.3
1320	92	103	138	179	272	388	440	1.7	58 5	8 8	8.9	4 7	8 1
1421	88	115	141	182	263	370	420	2 5	59.1	8 2	8.8	4.7	7 8
1443	90	117	146	189	275	377	422	2.1	59.1	8.4	8.4	4.8	7.5
2261	84	123	148	188	268	365	418	1.5	59.3	8.4	8.0	4.2	7.0
1288	93	111	118	126	151	231	380	0.0	75.6	9.1	9.0	1 0	11.1
1290	84	111	125	146	221	372	416	0 2	65.5	9 6	9.4	2.5	10.0
1524	89	109	129	160	234	334	396	2 2	62 3	9 8	9.55	3.1	9 5
2247	87	111	139	182	279	378	426	2 9	59.0	9 4	9.4	4.7	8.1
1362	92	116	144	184	267	371	422	2.8	59.5	9.4	9.1	4.5	7.5
1503	86	105	117	138	207	359	410	1.5	66.9	10 8	10.6	2 1	11 3
1352	88	103	119	141	215	357	417	2.2	65.7	10.1	10.4	2 4	10.9
1143	84	104	127	160	278	493	446	2.0	59.6	10 4	10.3	4.1	9 7
1468	88	109	130	168	258	353	460	2.2	60 5	10.1	9.75	3 8	9 2
1501	80	93	111	138	221	371	428	3.5	59.0	11.3	11.9	2 2	12 4
1559	91	102	124	162	260	375	422	3.5	59 8	11.0	10.4	3 5	10.1
2255	84	106	135	176	264	376	426	2.7	59 6	11 2	10.6	4.3	8 7
1294	76	80	106	143	266	385	450	4.3	63 0	12 5	13.3	3 7	13.5
1392	87	98	131	179	275	389	425	4 0	59.9	12 0	11.0	4.8	9 1
1493	80	..	105	140	231	355	402	5 7	65 3	13.3	13.6	3 4	13 6
1371	84	89	115	154	269	390	448	4 2	61.1	13.1	12.1	4 1	11 6
1509	78	..	91	132	264	401	452	7 5	62 3	16 4	16.0	4 5	16 8

*Temperatures at percentages are for percentages evaporated. †Slope = °F. rise per cent distilled at the 10 per cent point.

TABLE 2—DEVIATIONS OF GRAPHICAL FROM ACTUAL REID VAPOR PRESSURES

Number of samples	184
Average Reid vapor pressure	8.302
Maximum Reid vapor pressure	16.4
Minimum Reid vapor pressure	3.0
Average algebraic deviation	0.027
Maximum positive deviation	1.30
Maximum negative deviation	1.20
Average positive deviation	0.385
Average negative deviation	0.397
Average deviation	0.354

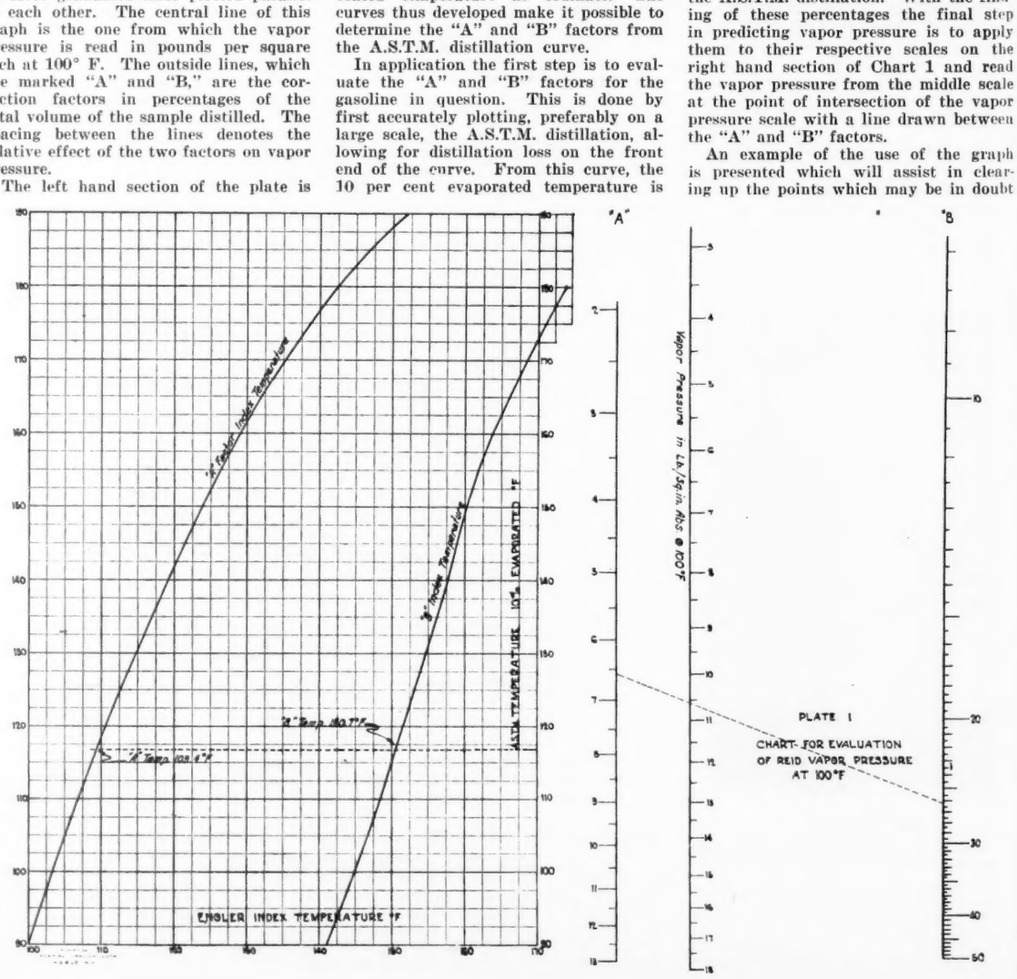
	No. of Samples	% of Total
Samples deviating 0.3 lb. or less	107	58.2
Samples deviating 0.5 lb. or less	138	75.0
Samples deviating 0.7 lb. or less	160	87.0
Samples deviating 1.0 lbs. or less	180	97.8

[1]The Oil and Gas Journal, May 31, 1928, page 148.

[2]References: S.A.E. Journal, May 1929, page 488.

Report of American Petroleum Institute, Tenth Annual Convention, December 4, 1929, Section III, page 4.

Report of Annual Meeting of Society of Automotive Engineers, January 20-24, 1930, preprint.



from the description. The fuel selected for this illustration is No. 1,503, in Table 1. The Engler distillation curve is shown in Chart 2. From the curve on Chart 2, it will be noted that the 10 per cent temperature is 117° F. From the curves on Chart 1, the "A" factor temperature is 109.4° F. and the "B" factor temperature is 150.7° F. From Chart 2 the per cent evaporated at 109.4° F. is 6.6 (the "A" factor), and the per cent at 150.7° F. is 26.3 (the "B" factor). Applying these to the alignment chart of Chart 1, it will be seen that the line between them indicates a vapor pressure of 10.6 pounds per square inch. The Reid vapor pressure, as determined in the laboratory for this fuel, was 10.8 pounds per square inch.

Comparison With Reid

In testing the accuracy of this method of arriving at vapor pressure, 184 samples of gasoline were used, which comprised a very wide range of gasoline types. Some of the characteristics of a representative group of these fuels are given in Table 1.

When the vapor pressure of the 184 gasolines had been determined graphically, the results were plotted directly against the actual Reid vapor pressures as determined in the laboratory. This comparison is shown on Chart 3. The central line is unity and the laterals are one-pound deviation lines. It will be noted that only four of the 184 samples failed to fall within the one-pound deviation and that the graphical results for low vapor pressures and high vapor pressures fall as close to unity as is the case with the great bulk of the samples, which fill the middle portion of the graph and which may be considered as largely composed of normal motor fuels.

It will be noted that aviation natural gasolines, benzol blends and fuels containing large quantities of natural gasoline are specially designated on Chart 3.

These types of gasoline are widely divergent in character, and yet it is possible to secure reliable predictions of vapor pressure in all three classes of products by the use of the graphical method.

In Table 2 will be found an analysis of the results of this comparison. The upper portion of the table shows the range of vapor pressures covered and the average and maximum deviations. The lower part of the table is a statement of the actual number of samples which fall within deviation limits of 0.3, 0.5, 0.7 and 1.0 pound per square inch, and their percentage relationship to the total number of samples. It is to be noted that for 75 per cent of the samples the graphically determined vapor pressure was within 0.5 pound per square inch of the actual Reid vapor pressure.

Motor Natural Gasoline

The specifications recently adopted by the Natural Gasoline Association of America for three grades of motor natural gasolines typify the class of motor fuels which contain large proportions of natural gasoline. These three grades of motor natural gasoline provide increasing "effective volatility" for varying climatic conditions, at the same time maintaining the "starting volatility," or vapor pressure, at suitable values.

In order to produce motor natural gasolines, it is necessary to use natural gasolines having much lower butane contents than are ordinarily employed. The A.S.T.M. distillation characteristics of the resultant blends are quite different from those of the conventional motor fuel.

To determine whether the graphical vapor pressure method gave satisfactory results on this type of motor fuel, the method was applied to a number of samples of Phillips "66," which is an outstanding example of motor natural gasoline.

Table 3 is a compilation of distillation and vapor pressure data on 35 samples of "66." It will be noted that the actual Reid vapor pressures and those determined by graphical means are in close agreement in nearly all cases, thus indicating the applicability of the graphical method to motor natural gasolines.

There are two distinct types of aviation gasoline in quite general use throughout the country. One is the product of the large refineries and in large part is a product of high initial and low endpoint. The second type of aviation gasoline, which is gaining in importance very rapidly, is aviation natural gasoline, which is natural gasoline very carefully processed to insure the minimum vapor pressure with the maximum volatility.

Reid vapor pressure values of the refinery type aviation fuels, when predicted by the graphical method, are in most cases lower than the actual results obtained in the laboratory. This condition does not exist in the case of the aviation natural gasolines, as will be seen by referring to Chart 5, upon which the graphical vapor pressures of the aviation fuels are plotted against the actual Reid values. There is a very slight tendency for the aviation naturals to have higher actual Reid values than the predicted Reid values. However, the deviation in no case exceeds 0.5 pounds per square inch.

The front end of the refinery type aviation fuels rises very abruptly to the 5 and 10 per cent temperatures, and the fuels have been sufficiently stabilized to have little or no distillation loss. The "A" factor of the graphical method of arriving at vapor pressure contemplates larger and more volatile fractions for the corresponding 10 per cent evaporated temperatures and consequently fails to be a true index. Also, the graphical method does not evaluate the latter half of the distillation, which in the case of most of these fuels has a temperature range a hundred or more degrees below the normal motor fuels and consequently must exert a material influence in the vapor pressure of the whole. The graphical vapor pressure of the aviation natural gasolines more nearly checks the Reid, due to the fact that its vapor pressure is almost entirely due to the part of the curve which is included in the "A" and "B" factors. The "A" factor is very small as in the refinery type gasolines, but the "B" factor is large and is the chief contributor to vapor pressure.

It was found that refinery type aviation gasolines with the 90 per cent evaporated temperature in excess of 270° F. gave graphical results that were close approximations of the actual Reid determination. This resulted in the conclusion that the characteristics of these fuels so nearly represented those of the motor fuels, upon which the method was based, as to make the results in these cases reliable. Hence, the generalization is made that the vapor pressure of aviation fuels of the refinery type, having A.S.T.M. distillation temperatures in excess of 270° F. at the 90 per cent evaporated point may be read from the chart with a degree of accuracy similar to that experienced in automobile motor fuels. For aviation gasolines having A.S.T.M. temperatures below 270° F. at 90 per cent evaporated, multiplying the vapor pressure determined graphically by 1.2, will give very close approximations of the actual vapor pressure.

Relation to Composition

The "A" and "B" factors of this graphical means for determining vapor pressure bear a distinct relationship to the composition of the most volatile portions of the hydrocarbon mixture. Thus, the "A" factor quite closely approximates the low boiling hydrocarbons of the butanes and lighter class, and the "B" factor represents pentanes and lighter. Hence, if the "A" factor is deducted from the "B" factor, the remainder is the pentanes fraction. Table 4 clearly illustrates this relation by actual comparison of fractional analyses with the "A" and "B" factors.

Since it is possible to closely estimate the composition of a motor fuel, as well as its vapor pressure, by graphical means, the method becomes doubly valuable, since it is possible to determine the components which most greatly affect vapor pressure and thus estimate the quality of the gasoline. Two fuels may have the same vapor pressure and widely separated 10 per cent evaporated temperatures. The one with a high 10 per cent temperature will depend on an excess of butanes and lighter for the vapor pressure, while the balance may be actually lacking in volatility. The fuel of the other extreme may be relatively deficient in butanes and lighter, but carry a large percentage of pentanes as the fraction mostly responsible for vapor pressure. Surely the latter would be more satisfactory as a motor fuel. There would be little evaporation loss and yet easy starting and rapid acceleration of a cold motor would be experienced for the reason that larger percentages of the intake mixture would be completely vaporized.

When using the chart, the habit of observing the slope of the line from the "A" to the "B" factor in Chart 1 makes it possible to quickly estimate the relative value of fuels. For similar vapor pressure values, the fuel having a line sloping downward from the "A" to the

(Continued on Page 156)

TABLE 3—DATA CONCERNING MOTOR NATURAL GASOLINES

	A.S.T.M. distillation data*								Reid V.P.		Bridgeman	
Engler No.	First drop	5%	10%	20%	50%	90%	End-point	Loss	A.P.I.	Actual	Graphical	Slope†	V.P.
‡1094	92	106	120	140	213	362	425	1.9	65 7	10.3	10.3	2 3	10.8
‡1290	84	111	125	146	221	372	416	0 2	65 5	9.6	9 4	2 5	10 0
‡1352	88	103	119	141	215	357	417	2 2	65.7	10 1	10.4	2 4	10 9
‡1385	88	104	121	142	214	364	417	2 0	65.2	10 0	10.4	2.7	10 6
‡1503	86	105	117	138	207	359	410	1.5	66 9	10 8	10 6	2.1	11 3
‡1520	86	103	117	136	198	355	414	1 5	68 0	10 8	11.0	2 2	11.3
‡2281	86	105	119	139	208	360	415	1 5	66 4	11.0	10.9	2 3	10.9
3640	108	117	133	158	225	303	409	2 0	63.5	7 8	7.6	3.0	8 7
3624	104	120	137	163	224	347	414	1 8	64 2	7 5	7 7	2.8	8 2
3632	104	115	135	161	226	349	402	2 8	63 9	8 2	8.4	3.3	8.4
3611	104	120	136	158	228	360	422	2.0	63 6	7.9	8.0	2 5	8.3
3615	102	127	141	163	229	347	410	1 0	64 0	6.9	6 8	2 3	7 7
3648	103	125	141	164	231	356	410	1.0	63.3	6 4	6.8	2 6	7 7
4054	98	114	130	150	215	360	418	1 5	65.0	8 0	8.4	2.4	9 2
4060	98	118	134	152	219	362	422	1.0	64 6	8 0	7 7	2.5	8 7
4056	98	120	133	151	222	362	424	0 5	64 6	8 0	7.7	2 1	8.6
4058	102	118	134	152	219	362	430	1 1	65 0	7.7	7.7	2 3	8.6
4053	100	121	135	155	220	359	420	1 1	63 9	7.1	7 2	2 2	8 3
4062	100	120	136	159	229	360	411	1.5	63.8	7 7	7.6	2.5	8 3
4051	102	122	139	162	233	361	418	1 1	63.5	6 9	6.9	2.5	7 9
4386	108	127	138	157	220	362	425	1 1	64 3	7 0	6 5	2.1	8 0
4402	108	124	137	156	220	361	424	1 3	64 5	6 9	6.8	2 3	8.2
4378	106	124	137	156	218	360	422	1.1	64 9	6.5	6.6	2 3	8.2
4426	94	119	135	152	213	355	421	0 1	65 1	7.6	7 5	2 1	8 4
4410	100	119	135	151	212	356	422	0 1	65.1	7 6	7.4	2 2	8 4
4394	96	118	133	153	230	365	425	1 2	64.9	8 0	7.8	2.2	8 7
4370	98	111	130	154	215	363	423	2.1	64 6	9 5	9 5	1.9	9 2
4889	94	107	119	139	205	355	418	1 8	60 1	9 1	9.3	1 7	10.9
4933	97	111	120	140	208	354	420	1 5	66 6	9.5	9.6	2 2	10.6
4905	90	108	121	138	206	356	420	2 1	66 8	9.6	9 7	2 1	10 6
4877	93	113	123	142	208	358	418	1.0	66.0	8 8	8.5	1.9	10 3
4929	96	111	123	141	206	360	420	1 8	66.8	9 3	9.3	1.9	10 3
4909	96	116	128	47	214	361	416	1 2	65 7	8 2	8 3	2.1	9 5
4893	100	116	128	147	212	364	420	1 8	65 5	8 6	8.1	2 0	9.2
4917	96	119	130	147	214	364	416	0.2	65 7	8.1	7.8	1 7	9.2

*Temperatures at percentages are for percentages evaporated. †Slope=Degrees F. rise per per cent distilled at the 10 per cent point. ‡Included in 184 samples of Plate 3.

TABLE 4—COMPARISON OF "A" AND "B" FACTORS WITH FRACTIONAL ANALYSIS*

Engler No.	Propane and lighter	Butanes	Butanes and lighter	Pentanes	Pentanes and lighter	"A" Factor	"B" Factor
1520	0 7	5 9	6.6	14 0	20 6	6 9	27 6
1516	0.4	9 0	9 4	12 9	22.3	7 4	22.5
1522	0 2	4.6	4 8	10 4	15 2	4 7	15.9
1524	0 5	5.9	6.4	11 5	17 9	6 0	18 3
1526	0 2	4.7	4 9	6.8	11 7	4 8	12 0
1528	1 0	6.0	7 0	9.9	16 9	6 3	16.9
1530	1 9	10.0	11.9	13 2	25 1	10 6	22 8
1532	1 0	6.2	7 2	10 5	17.7	7 2	17.0
1534	0 2	6.3	6 5	13 0	19 5	6 6	16 8
1539	0 6	4 5	5.1	9.6	14 7	4.75	15 1
1541	0.6	5 4	6 0	8.1	14 1	5 9	15 3
1543	1 1	5.0	6 1	9.2	15 3	6 0	15.1
1545	0 8	5.2	6.0	8 4	14 4	6 0	13 7
1547	1 0	7.6	8 6	13 1	20.3	8.6	19 2
1549	1 4	5.6	7 0	9.3	16 3	7 0	16 6
1551	0 5	5 0	5.5	8.0	13 5	6 0	14.2
1553	1.1	7 8	8 9	11.2	20 1	9 0	20 0
1555	1.0	7 0	8 0	12 1	20 1	7 7	20.0
1557	1 0	6.6	7.6	9 9	17 5	8 1	17 9
1559	0 8	6.7	7 5	9 8	17.3	6 9	18.0
1561	0 6	4.9	5 5	8 3	13 8	5 5	17 0
1563	0 3	5.3	5.6	9.2	14 8	5.6	15 8
1572	0.6	4.7	5 3	7.7	13 0	5 7	13 9
1574	0 6	6.2	6 8	10.0	16 8	6 8	17.4
1576	0.5	5 7	6 2	9.6	15.8	6 0	16.0
1581	0 0	4.5	4 5	10 2	14.7	4.5	15 5
1583	0 0	4.8	4 8	6.4	11 2	4 1	12 7
1585	0.2	5 1	5 3	9.7	15 0	5 1	15 5
1587	0 5	4.8	5 3	8.8	14 1	5.1	14 5
1589	0 3	4.9	5.2	8 5	13 7	5 1	14 9
†5339	0 0	4.1	4 1	6 7	10.8	4 1	11.4
†5365	0 5	5.0	5 5	9.1	14 6	4 9	15 4
†5373	0 0	6 1	6.1	12.0	18 1	5.0	18 1
†5387	0.5	5 7	6 2	10.6	16 8	5 4	16 7
†5401	0 0	4.9	4 9	8.5	13 4	4 4	15.1
†5409	1 2	5.3	6.5	8 5	15 0	6 8	14 6
†5414	1 2	9.2	10 4	8 8	19.2	9.1	17 9
†5422	0 0	4.0	4 0	5.9	9 9	3 1	9 7
†5427	0 0	4 3	4.3	7.1	11 4	4 2	11.75
†5444	0.0	6 1	6 1	9.6	15 7	5 0	15 3

*Percentages are volume percentages, and the proportions designated for individual components are the proportions of hydrocarbons having boiling points close to the indicated components. †Not included in the 184 gasoline samples considered.

TABLE 4 (Continued)—COMPARISONS OF "A" AND "B" FACTORS WITH FRACTIONAL ANALYSIS*—AVIATION GASOLINE†

Engler No.	Propane and lighter	Butanes	Butanes and lighte	Pentanes	Pentanes and Ighter	"A" Factor	"B" Factor
4694	0.5	7.3	7 8	17.0	24 8	5.4	27 1
4701	0 0	2.3	2.2	8 2	10 5	2 3	9 7
4708	0 8	7.9	8 7	12 8	21.5	6 0	20.3
4716	0 0	3.6	3 6	15.8	19 4	3 1	25 6
4722	0 3	4 6	4.9	12.3	17 2	4.1	18 5
4761	0.2	3 3	3 5	10.6	14 1	2 7	21 6
4781	0 3	3.5	3 8	9.4	13 2	3 1	12.8
4788	0 0	2.0	2.0	24 8	26 8	2 7	49 0
4824	0 8	4.6	5 4	8 5	13.9	3.9	13 7
4831	0 4	4.2	4 6	9.8	14 4	4 1	14 0
4858	0 0	2 3	2.3	15.9	16 2	2 3	24.6
4845	0.3	3 4	3 7	16.9	20 6	3 0	28 7
4852	0 5	4.0	4 5	16.5	15 0	3.5	14 9
4947	0 0	2.8	2.8	5 2	8 0	2 0	9 5
4954	0 0	1.5	1 5	15 7	17.2	1 6	30.2
4961	0 3	5.3	5 6	9.9	15 5	5 0	15 25
4968	0 0	3 6	3.6	11.8	15 4	2.5	17 1
4975	0.0	6 1	6 1	12.2	18 3	5 7	16 25
4982	0 0	1.3	1 3	31.2	32 5	2 2	43.1
4989	0 0	5.2	5.2	35 6	40 8	7 0	50 3
4996	0 0	5.0	5 0	13 2	18.2	3.1	18 2

*Percentages are volume percentages, and the proportions designated for individual components are the proportions of hydrocarbons having boiling points close to the indicated components. †Not included in the 184 gasoline samples considered.

Use of Magnetometer in South Texas

Erroneous Impression That It Can Be of No Assistance in That Section. Reduces Failures Made Solely on Surface Evidence

By L. Spraragen

Considerable has already been written regarding the use of the magnetometer. As a rule the articles have been based on experience with the instrument in Kansas, Oklahoma, the Texas Panhandle, New Mexico, or other areas where the structures investigated have been of the nature of huge buried ridges or mountains.

For such immense structures the magnetometer is perhaps as well adapted for exploration as any geophysical device, and considering costs of operation is economical.

When using the magnetometer on these large structures stations are generally taken at 1 mile intervals, sometimes as in West Texas, where roads are infrequent and at times are merely passable trails, readings of magnetic intensity are made along these trails at 1-mile intervals so that it sometimes happens there may be areas of 10 to 15 square miles in which no observations are made.

Also on these huge structures extending several miles in length and 2, 3 or 4 miles across, the change in intensity in a distance of 1 mile may be 150 gamma (New Mexico) or as much as 550 gamma per mile (western Kansas).

In work of this nature the sensitivity of the magnetometer is adjusted to approximately 30 gamma per scale division. It is also apparent that a diurnal variation of 15 to 20 gamma can be distributed over a day's work without introducing any appreciable error in the final picture, providing of course that these so-called diurnal variations are real and not due to errors in reading or temperature coefficients.

The final maps for these large structures prepared from magnetometer data are as a rule contoured on a 25, 50 or 100-gamma interval.

An Erroneous Impression

Bearing these facts in mind it will not be very difficult then to explain the reason for the general erroneous impression that exists in the minds of some oil operators that the magnetometer can be of no assistance in the South Texas areas.

First of all, the type of structure that is found in this part of Texas is usually a fault or a Serpentine plug or a salt dome. In view of the fact that the torsion balance has already proved highly efficient in outlining salt domes no attempt has been made by the writer to map a salt dome with the magnetometer.

Faulted structures are as a rule 3, 4 or 5 miles long and produce over a width of 3,000 to 4,000 feet. Serpentine plugs generally cover an area of 400 to 600 acres.

With the opening of the Bruner or Salt Flats Field in Caldwell County, the Darst Creek fault in Guadalupe County and the Penn-Mansford fault area, attention has of course become focussed on all the parallel faults in this vicinity.

Numerous blocks have been assembled based on surface exposures. In many instances these surface exposures can be traced for miles, become lost in bottom lands and are again picked up 1 or 2 miles further off.

Many of these surface faults have already been tested with wells and so far the number of producing faults is a very small percentage of those tested.

As a rule a surface fault mapped by one reliable geologist can be checked by other geologists but even so it does not mean that the subsurface conditions that are necessary for production will be found as a reflection of the surface evidence.

Reduce Number of Failures

If therefore some geophysical method can be used to determine subsurface conditions in an area recognized as having the proper surface evidence then that geophysical method will be invaluable in reducing the number of failures that result when a play is made solely on surface evidence.

For the most part a magnetometer operator who has obtained most of his experience in Kansas, Oklahoma or West Texas will be at a decided disadvantage when transferred to the Southeast Texas area. Here he will find very unusual magnetic conditions. In many instances several miles may be traversed without much change in field intensity being observed. Temperature changes during the summer months may range over 20° from the start of the day's work to the middle afternoon readings. Diurnal variations that might be considered insignificant elsewhere have to be carefully considered here. In fact the operation of the magnetometer now becomes the operation of a very delicate and highly sensitive laboratory instrument transported from the laboratory to the comparatively rough service in the field.

Because of the relatively small anomalies that will be found in this area it is essential that every precaution that tends toward extreme accuracy be observed. Readings are taken at intervals of 1,000 feet or even less. Temperature readings are carefully made and accurate determination of scale value and temperature coefficients must be made quite frequently. Likewise the diurnal variation must be given extreme consideration.

As has been pointed out the width of the producing area on a fault play ranges between 3,000 and 4,000 feet. It is therefore obvious that in making a traverse across a fault magnetic readings should be taken at intervals of 1,000 feet or less.

Surprise in Store

Another surprise is in store for the operator who makes his first attempt at locating a fault. In some instances where the actual fault displacement is as much as 350 feet the magnetometer will show a maximum difference of 10 or 15 gamma. If, however, a series of traverses be made with the magnetometer at right angles to the strike of the surface fault it will be found that the fault can be outlined.

Of course when it is recalled that a fault with a 350-foot throw may give only a maximum difference of 15 or 20 gamma then it is obvious that if the entire structure is to be mapped magnetically the contour interval will have to be 10 or possibly 5 gamma. And continuing along this same line of reasoning it is clear that every detail involved in obtaining readings to this high degree of accuracy will have to be carefully watched.

To do satisfactory work under such exacting conditions requires time and patience, but the reward is sufficient to

(Continued on Page 138)

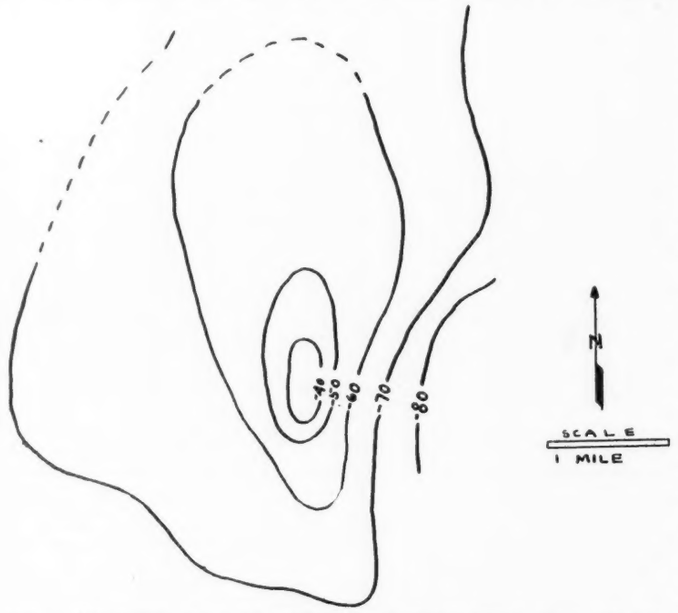


Plate 1—Magnetometer map of the "Yoast Field" in Bastrop County, Texas. This has been proven by drilling to be a Serpentine field.

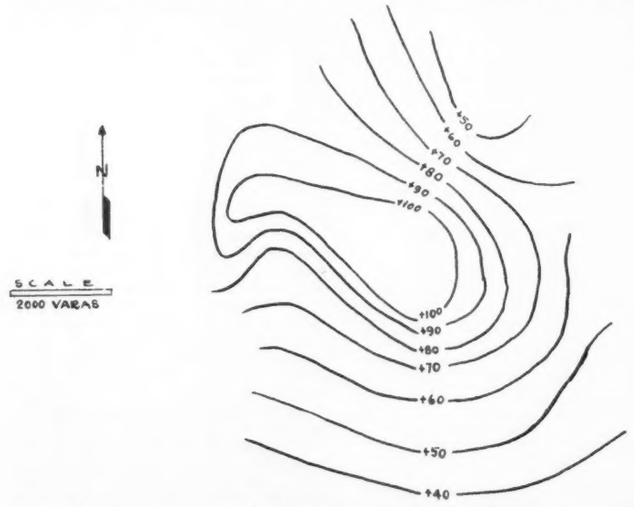


Plate 2—Another example of a Serpentine plug mapped with the magnetometer. This is known as the Dale Field, Caldwell County, Texas.

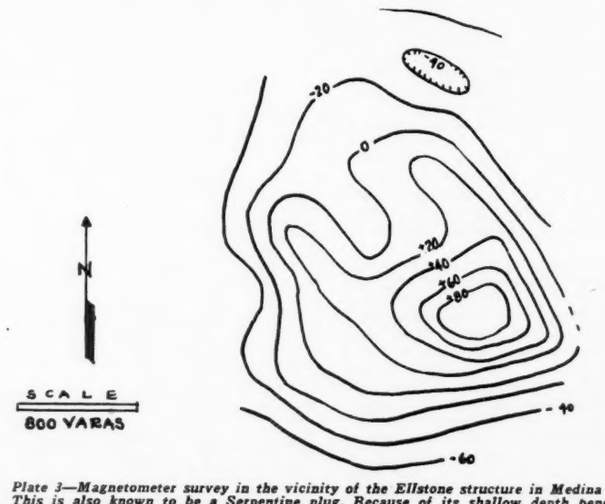
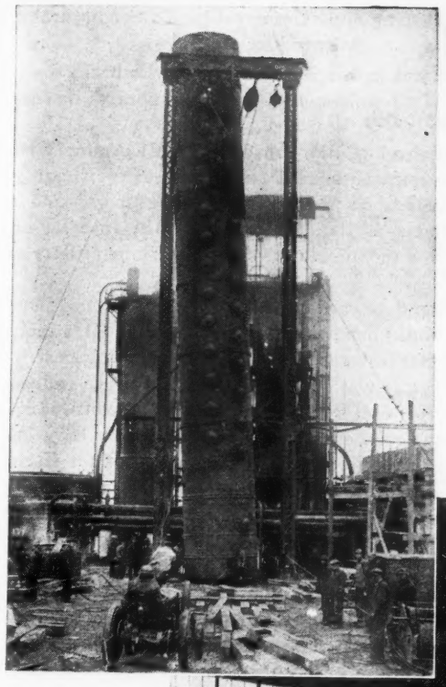


Plate 3—Magnetometer survey in the vicinity of the Ellstone structure in Medina County. This is also known to be a Serpentine plug. Because of its shallow depth beneath the surface, about 600 feet to the top of the Serpentine, the reaction on the magnetometer is considerably greater than for the Dale or Yoast Fields.



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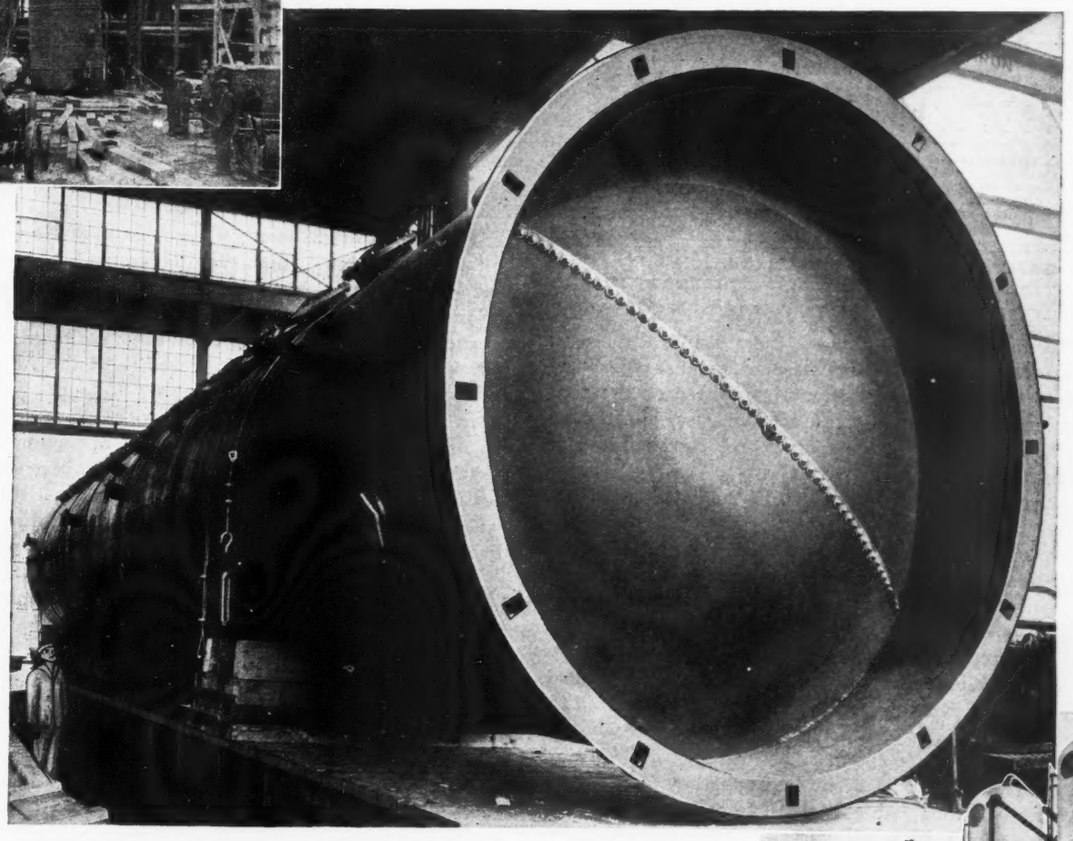

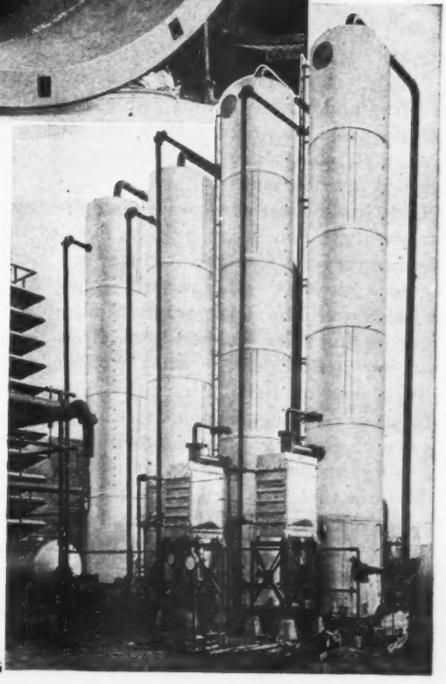

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MEMBER AUDIT BUREAU OF CIRCULATIONS

A DISAPPOINTMENT AND A SUGGESTION

When the Natural Gas Association was merged into the Natural Gas Department of the American Gas Association three years ago it was thought to be a fitting consolidation because of the trend towards the mixing of natural and manufactured gases and the fact that as public utilities natural gas companies and manufactured gas companies had many of the same problems.

Experience has raised serious doubts of the wisdom of that conclusion.

The feeling has been growing among natural gas producers that the merger was a mistake, a feeling that has been accentuated at each succeeding meeting of the department. The meeting just held at New Orleans emphasized this.

Many of the producers plainly feel out of their element in these meetings devoted largely to discussions of sales, rates and loads, topics of interest at a utilities convention but having no direct bearing on the every-day problems of the natural gas producer who produces and transports the gas to the markets.

This division of interest must be no less apparent to the manufacturing and sales divisions who are but little concerned, if at all, with the problems of the natural gas producer, but are vitally interested in efficiency in manufacturing, sales promotion, rate making and load distribution.

Only in the most general way is there any community of thought between these two divisions. The lives of the men indicate the divergence very clearly. The producer is a man of the open spaces, accustomed to wresting his reward from Nature. His talk of work in the fields would be as largely unintelligible to the men in the manufacturing and sales division as he finds their discussions of manufacturing difficulties and sales problems.

He thinks of distribution in wholesale terms. They think of it in terms of retailing. They are vastly concerned about appliances for the use of gas, have indeed established a costly laboratory to test gas-using appliances, cook stoves, heating furnaces and refrigerators.

Manufactured gas men speak of house heating as if of only a few years development, but the natural gas producer has been heating whole communities with gas for a generation. The possibilities in industrial utilization being stressed by the manufactured gas men are familiar to the natural gas men who have seen towns built up with the incentive of cheap natural fuel.

The gas business to the manufacturing gas division is a matter of engineering, manufacturing and salesmanship. To the natural gas man it is a matter of raw material production.

The natural gas man was primarily an oil man who became a gas man because by reason of circumstances beyond his control he found gas instead of oil.

His problems are much more like those of the oil producer than they are those of the manufacturer and distributor of artificial gas. His interest in the methods of making manufactured gas and retailing it is limited, almost as little as would be the interest of a wheat growing farmer in a technical convention of flour millers and grocery salesmen.

It is true that the trend towards mixing natural gas and manufactured gas is making rapid headway, but that is, after all, a matter of utilization after the natural gas producer has done his part.

There was a time when it was supposed the natural gas industry was doomed to extinction and replacement by manufactured gas, in which case the natural gas companies might naturally have been forced to interest themselves in the manufactured product if they wished to continue in business. But the discovery of vast reserves of natural gas has pushed that probability into the remote future.

Natural gas when produced may be taken over by the manufactured gas companies or utility companies for distribution in increasing quantities and transported hundreds of miles to markets the natural gas industry never dreamed of, but this financing by utility and electric companies is a phase outside the actual business of producing natural gas which was the corner stone of the Natural Gas Association.

When natural gas men get together as at New Orleans they like to talk about things which they understand, matters affecting their every-day work, problems in drilling and production, in transportation, pipe line construction, welding, pipe coating, ditching. Out of such exchange of experience they can gain practical benefits just as the oil men do in the meetings of the American Petroleum Institute Division of Production.

In fact it has been suggested that this is what should be done in the natural gas industry; that instead of having a natural gas department of the American Gas Association there should be a Natural Gas Division of the American Petroleum Institute where the natural gas production and pipe line men could meet to consider and discuss their own immediate problems as the oil men do.

The natural gas industry is an integral part of the petroleum industry. It belongs in the American Petroleum Institute which already recognizes that fact by its selection of representatives of the natural gas industry on its directorate. The logical and natural further step of creating a Division of Natural Gas in the Institute has not been taken only because of the already existing Natural Gas Association.

There is yet another point to be taken into account. The expense of annual conventions and meetings has been severely criticised by many executives in all businesses who have raised the question whether they are worth the expenditure of time and money spent.

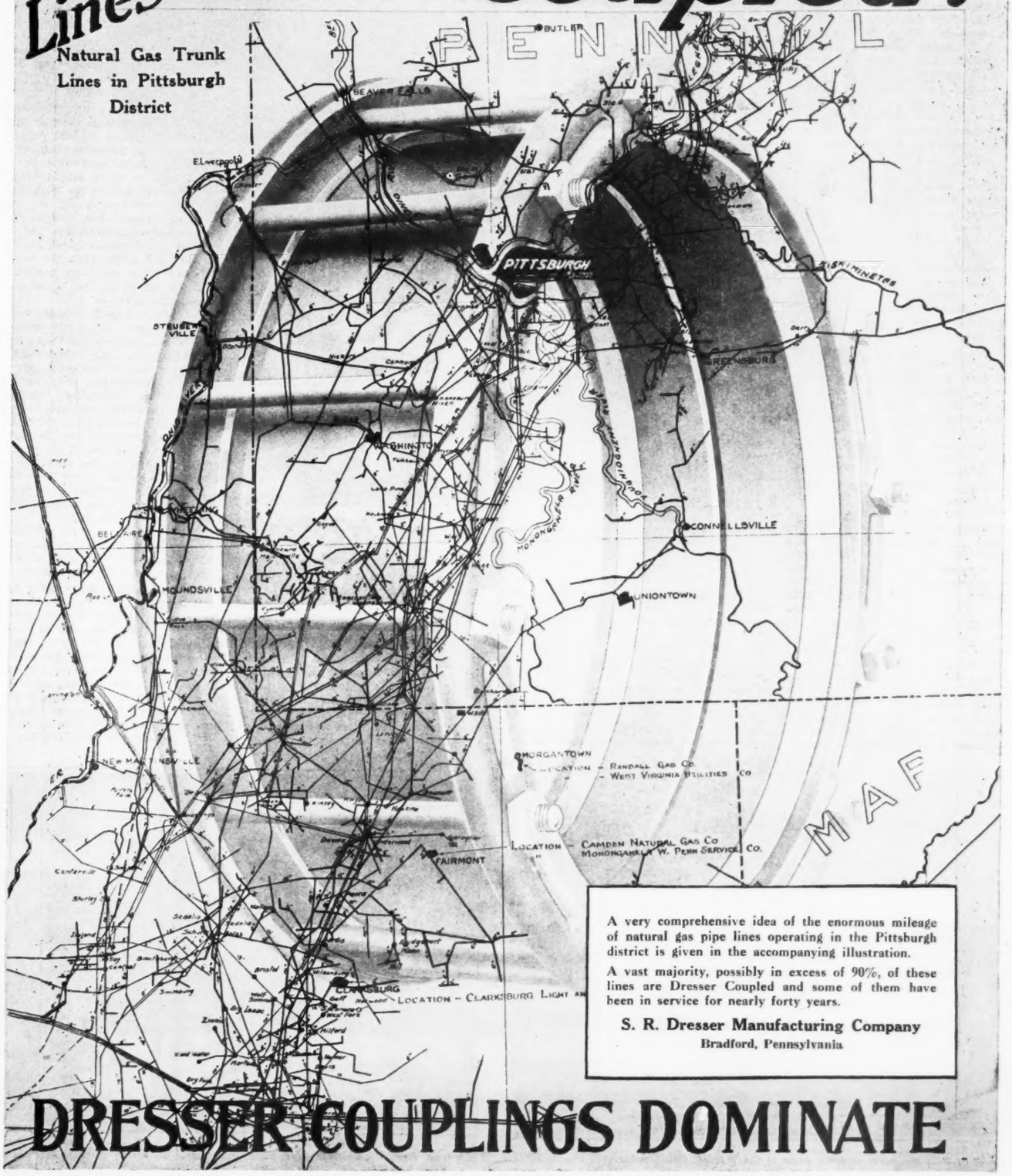
The Southwest Utilities Association recently held a convention in Oklahoma. The bulk of the papers read at that meeting and the resulting discussions paralleled many of the topics at the New Orleans convention of the Natural Gas Department.

Here would be an opportunity to eliminate one convention expense. The manufacturing and sales divisions could continue to meet with the American Gas Association at Atlantic City while the natural gas producers would assemble with the American Petroleum Institute at Chicago.

And since the Southwest is the center of the natural gas producing industry the Natural Gas Division could unite with the International Petroleum Exposition in holding its annual field meetings here when the oil and gas producers of the country come to Tula.

This summary of the situation and suggestion is offered with no thought of criticism of the American Gas Association which has been an exceptional host to the natural gas department, but is offered simply because there has now been sufficient experience of the merger to realize that it was formed under a misapprehension and could not result other than it has in disappointment to the natural gas industry.

A Vast Majority of these Lines are DRESSER Coupled!



A very comprehensive idea of the enormous mileage of natural gas pipe lines operating in the Pittsburgh district is given in the accompanying illustration.

A vast majority, possibly in excess of 90%, of these lines are Dresser Coupled and some of them have been in service for nearly forty years.

S. R. Dresser Manufacturing Company
Bradford, Pennsylvania

DRESSER COUPLINGS DOMINATE

Vapor Recovery and Fire Prevention

Description of New System for Gathering Waste and Dangerous Vapors Installed in California Refinery. Several Unusual Features

By H. R. Linhoff
Manager, Gas Department, Richfield Oil Co. of California

The Richfield Oil Co. of California has just completed and placed in operation at its Watson refinery, Watson, Calif., a modern vapor recovery and fire prevention system that contains a number of unusual features. The plant is designed to handle a maximum of 5,000,000 feet of vapors per day at 40 pounds per square inch gauge pressure, giving a leeway which is in excess of present needs of the refinery.

The science of vapor recovery and fire prevention at refineries is one of the most interesting and profitable phases of the petroleum industry. The Watson plant cost approximately $200,000 to construct, which, on a basis of 30 days' practical operation, will be amortized within three months and will show a profit of about $750,000 annually.

The term "vapor recovery" as used in the petroleum industry, applies to the recovery and utilization of production, refinery and tank farm vapors, which if not recovered would otherwise be wasted. In the past the loss of these vapors has often been referred to as "evaporation loss" and producers and refiners have been inclined to neglect the importance of these losses.

It is now a well known fact that pumping of oil and changes in temperature in a tank farm actually cause vaporization of certain valuable fractions of the oil, practically all of which can be profitably recovered and the remainder used for fuel. Losses of this nature can be reduced in most cases by insulation, water seals and floating roofs, but they cannot be completely eliminated without some system of collection and recovery for the vapors.

Serves Several Purposes

In general, a vapor recovery and fire prevention system such as found in a modern refinery and its tank farm serve several purposes. First, it utilizes receiving house and tank farm vapors, extracting therefrom a product similar in quality to natural gasoline and leaving residue or dry gas available for fuel. Second, it eliminates a serious fire hazard through collection and proper disposition of inflammable waste vapors. Another important function of such a system is the reduction in air content of the vapors in the tanks.

In addition to the usual tank vent valves such a system includes explosion relief valves, flame arresters, tank regulators, vapor collection and repressuring pipe line systems, a compression plant, an absorption plant and a stabilizer plant.

Partial removal of the gasoline fractions from the wasted vapors is obtained by compression and cooling and the remainder by absorption in oil, redistillation and condensation.

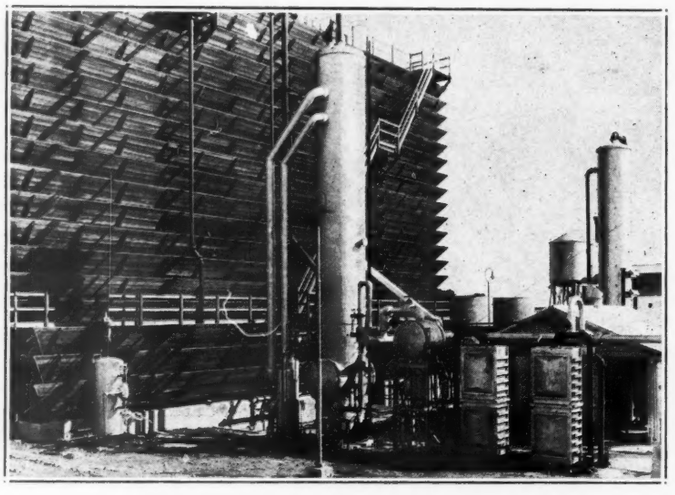
The reduction in air content of the vapors in the tanks is secured by "repressuring" the tanks with air-free dry gas as it is required. When a tank is being pumped out or when the contents of a tank are dropping in temperature, and the release of vapors from the oil is not sufficient to fill the vapor space caused by the rate of pumping or drop in temperature, instead of taking in air to fill the vapor space, air-free dry gas is admitted. The object in reducing the air content of the vapors in tanks is primarily to reduce the fire hazard and if tanks are properly equipped, and operated, the air content in their vapor spaces will rarely be sufficient to support combustion or to produce an explosive mixture. Another object in reducing the air content of the vapors in the tanks is to reduce oxidation and cut down the rate of corrosion.

The principal objects of a complete vapor recovery system are the recovery of gasoline and dry gas from otherwise wasted vapors, and the reduction in fire hazard to the entire refinery by proper disposition of these vapors.

New Systems in California

With the development of the oil fields in Southern California during the past three years, the increased stocks of high gravity crude oil and the increased throughput of our refineries, several new vapor recovery and fire prevention systems have been erected in this area. Companies already operating vapor recovery systems have enlarged existing systems or installed new systems to handle waste vapors from new tank farms and distillation units.

Richfield's new system at Watson is composed of tank regulators, a vapor collection and repressuring circuit, a three-unit compression plant, an absorption tower, a distillation system, a high pressure stabilizer and a special cooling tower, built under the supervision of the manager of the gas department.



Comprehensive view of distillation system with water separators and gasoline accumulator on the left.

Source of Vapors

Vapor is supplied to the system from the look boxes of 5 crude oil distillation units and 75 active tanks, containing high gravity crudes, high gravity refined oils, motor fuel and natural gasoline. The average vapor collected and passed through the recovery plant contains from 10 to 12 gallons of gasoline per thousand feet.

Regulators

Collection of the gas is effected by the application of vacuum through tank regulators which serve a dual purpose and consist of a pressure regulator and vacuum regulator controlled by a pilot valve operated by a single diaphragm. When the pressure in the tank builds up to a predetermined point, the pressure regulator allows vapors to pass from the tank into the collection line. The vacuum regulator is connected to an air-free dry gas line and opens when the vacuum in the tank drops to some predetermined point and allows dry gas to fill the vapor space in the tank.

The pressure and vacuum regulators are of the motor valve type actuated by the dry gas pressure used for repressuring the tanks. This feature insures a sensitivity well under one-tenth of one inch of water vacuum or pressure.

A similar controller without the vacuum regulation feature is used to collect waste vapors from the distillation units. Collection lines from the water separators and look boxes are run into a header leading to the regulator located near each receiving house. This regulator is actuated by the pressure in the header instead of by dry gas pressure as in the case of the tank regulators.

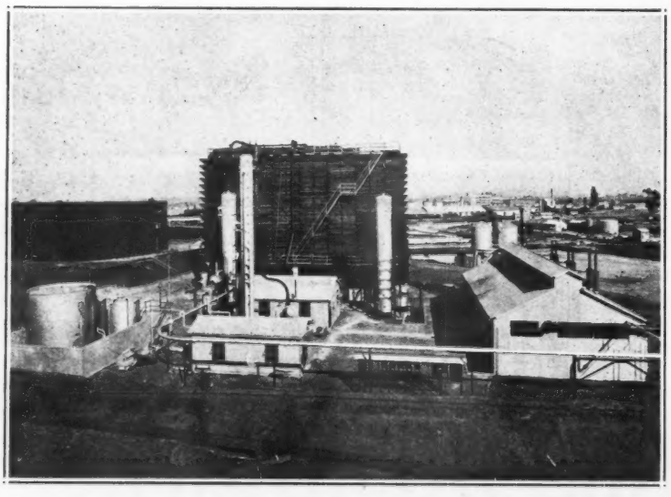
In addition to the tank regulators and pressure regulators the tanks are also equipped with vent valves, explosion relief valves and flame arresters.

Collection and Repressuring Lines

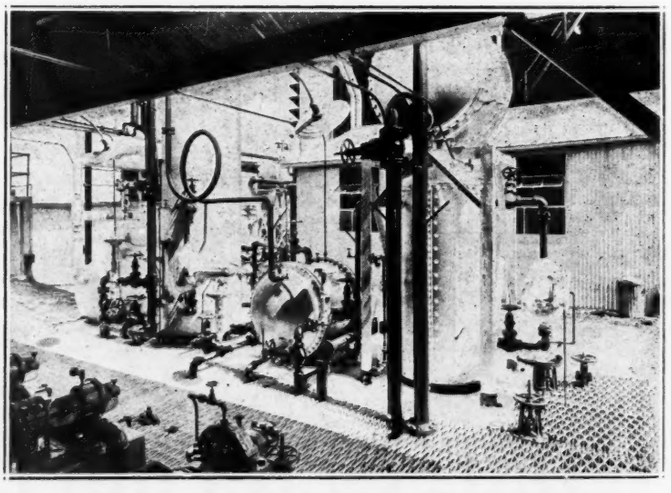
Passing from the tanks and receiving houses the waste vapors are taken through suitable lines laid so as to drain to a central point. Where the topography prevents complete drainage, means have been provided for removing and disposing of the condensate as it accumulates.

Removal of the condensate is automatically effected by a vacuum unloader. An interesting feature of this unloader is its

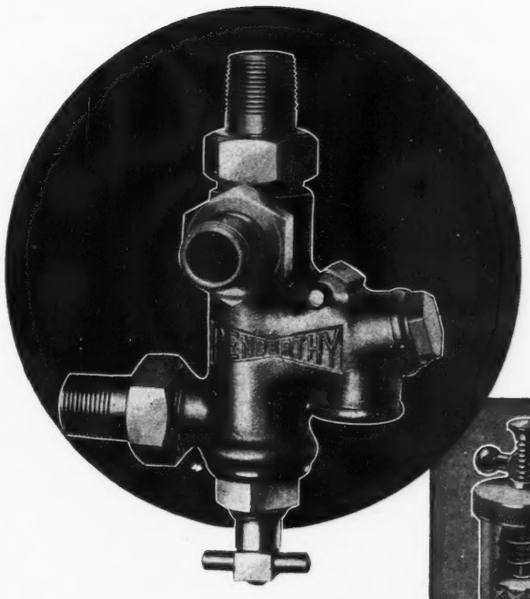
(Continued on Page 141)



General view of the vapor recovery plant at the Watson, Calif., refinery of the Richfield Oil Co.

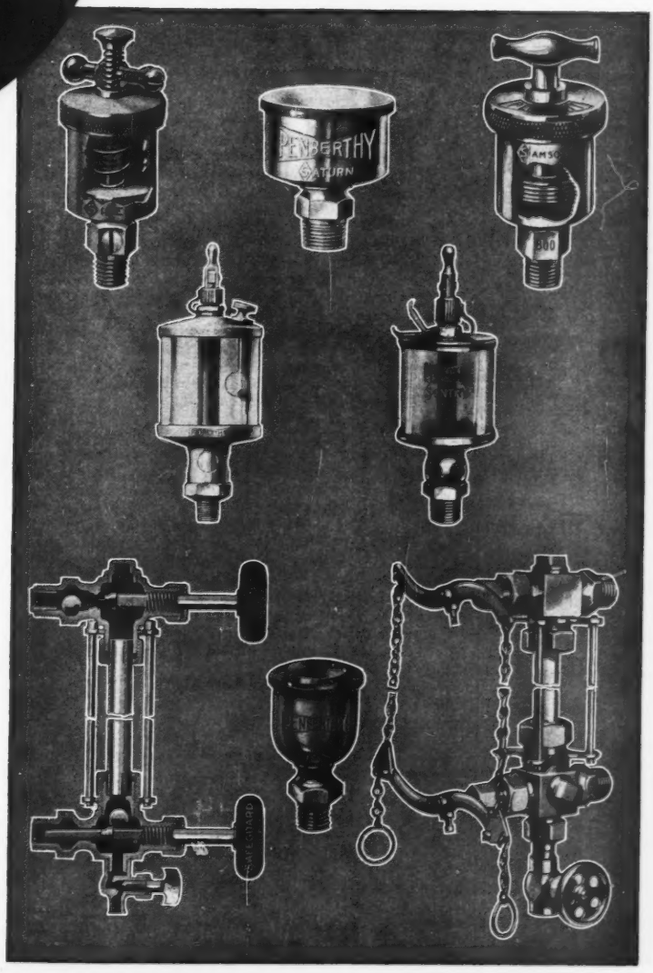


Close-up view of stabilizer illustrating arrangement of kettle, column, heat exchanger, reflux condenser and reflux accumulator with motor valves and liquid regulators.



ECONOMY SUGGESTS

PENBERTHY PRODUCTS



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FINAL PROGRAM FOR TULSA MEETING A.P.I. DIVISION OF PRODUCTION

The final program for the spring meeting of the Mid-Continent District of the American Petroleum Institute Division of Production to be held in Tulsa, May 23 and 24 at the Mayo Hotel in the Crystal Ballroom is announced as follows:

Registration will start at 9 a. m. and there will be a fee of $2.50 charged to cover cost of mimeographing papers and other meeting expenses. This fee also includes a luncheon on the sixteenth floor of the Mayo Hotel.

The meeting will be called to order at 10 a.m. with J. R. McWilliams and R. W. Bond acting as chairmen.

President E. B. Reeser of the American Petroleum Institute will deliver the opening address and he has chosen for his subject, "Two Pictures of the Petroleum Industry." W. N. Davis, chairman of the Division of Production will follow with an address on the problems of that division.

C. A. Young, executive secretary, will outline the activities of the division of production. His talk will be followed by a report of the nominating committee and election of officers for the Mid-Continent district for 1930.

After luncheon the meeting will again assemble at 2 p. m. with W. K. Whiteford and F. W. Robson acting as chairmen and the subject to be discussed will be "Recent Developments in Deep Well Pumping." R. R. Hawkins, division engineer for The Texas Company, Tulsa, will lead this discussion.

The second paper for the Friday afternoon session will be "Weighing Wells" prepared by R. M. Carr, Sinclair Oil & Gas Co.; H. D. Collins, Gypsy Oil Co.; R. R. Hawkins, The Texas Company, and L. F. Thompson, Carter Oil Co.

There will be one session only on Saturday, May 24, and it will start at 9:30 a. m. with R. R. Hawkins and C. V. Millikan acting as chairmen. The first paper will be presented by C. P. Parsons, Halliburton Oil Well Cementing Co., on "Mud Fluids."

A paper on "Oil Treating Methods in the Mid-Continent" has been compiled by C. D. Miller, assisted by Paul L. Gaurin, Shell Petroleum Corp.; R. R. Hawkins, The Texas Company; J. R. McWilliams, Skelly Oil Co.; L. A. Ogden, Empire Companies; Charles Prather, Gypsy Oil Co.; C. A. Shaner and I. S. Salinkov, Carter Oil Co. This will conclude the technical sessions of this meeting and Saturday afternoon will be devoted to whatever activities the individual members prefer.

The meeting is under the direction of the program committee with W. K. Whiteford acting as chairman, and R. W. Bond, R. M. Carr, K. A. Covell, E. H. Griswold, R. R. Hawkins and D. L. Trax assisting.

THE OIL MAN'S CALENDAR

May 19-20—San Antonio, Tex., National Oil Scouts Association of America.

May 20-22—Tulsa, annual meeting, Natural Gasoline Association of America, Mayo Hotel.

May 21-23—Los Angeles, Calif., National Foreign Trade Conference.

May 23-24—Tulsa, spring meeting, Mid-Continent section, A.P.I. Division of Production, Mayo Hotel.

May 23-24—Tulsa, Mid-Continent Oil Scouts and Land Men's Association.

May 25-29—French Lick Springs, Ind., summer meeting, Society of Automotive Engineers.

May 30—Indianapolis, Ind., annual 500-mile automobile race, Speedway.

June 2—Washington, D. C., Conference on Greasing Equipment, A.P.I., and Conference Committee on Weights and Tolerances.

June 3-6—Washington, D. C., Twenty-third National Conference on Weights and Measures, United States Bureau of Standards.

June 4—Norman, Okla., Opening of Petroleum Engineering Field Course, University of Oklahoma.

June 4-6—Detroit, Mich., American Institute of Chemical Engineers, Book-Cadillac Hotel.

June 5—New York, annual meeting, National Automobile Chamber of Commerce.

June 12-13—Charleston, W. Va., annual convention, West Virginia Oil Marketers Association, Daniel Boone Hotel.

June 13-14—State College, Pa., Oil, Power and Gas Divisions, American Society of Mechanical Engineers.

June 16-25—Berlin, Germany, World Power Conference.

June 23-26—San Francisco, Calif., convention, American Railway Association.

June 23-27—Atlantic City, N. J., annual meeting, American Society for Testing Materials.

August 4-9—New York, International Exposition of American Import Trade, Grand Central Palace.

September 2-4—Toronto, Ontario, North American Gas Tax Conference King Edward Hotel.

September 8-12—Cincinnati, Ohio, Eightieth meeting, American Chemical Society, Hotel Gibson.

September 29-October 4—Pittsburgh, Pa., petroleum section, National Safety Council.

October 6-11—Washington, D. C., Sixth International Road Congress.

October 14-16—Kansas City, Mo., convention, Big Four State Jobbers.

November 10-13—Chicago, Eleventh annual meeting, American Petroleum Institute, Stevens Hotel.

Late Fields

KANSAS

New operations in Kansas for the week ending May 10 reached a total of 38 first reports, which is the largest number for several months. Greenwood County, with nine, led the State; Rice County had five; Butler, Cowley, Morton Counties, 3 each; Stevens, Rush, McPherson Counties each had two; Marion, Woodson, Sedgwick, Sumner, Edwards, Rooks, Graham, Barber, Reno Counties each had one.

Allison-Fitzwilliam and Slick, Pryor & Lockhart's No. 1 Metzger, SW cor. SE NE Section 21-20-10w, Rice County, swabbed 480 bbls. in six hours. Owners are making a 48-hour swabbing test and the gauge was on the first six hours output, indicating the well is making 80 bbls. an hour. It extends the production in the Schurr Pool, a quarter mile east. The oil was found in Silicious lime at 3,357-70 feet.

Sinclair Oil & Gas Co.'s No. 1 F. Kamas, SW cor. Section 28-31-1w, Sumner County, north of Wellington, found the chat at 3,664 feet, with a showing of gas; oil at 3,671 feet. At 3,673 feet oil rose 100 feet in the hole. The well was drilling deeper.

NEW MEXICO

Fisher & Lowerie's No. 1 State, Section 11-18-36, Lea County, New Mexico, is drilling at 5,148 feet in lime. The hole filled 800 feet with oil at 5,154 feet and 2,000 feet at 5,163 feet. It is several miles northwest of production.

OKLAHOMA

The Oklahoma City Pool was extended 4 miles east and a mile north when the wildcat test of the Ryan Consolidated Petroleum Corp., No. 1 Lawton, NE cor. NW, Section 3-11-2w, Oklahoma County, got a showing of oil and gas through rotary mud at a total depth of 6,558 feet. Owners say the showing is in the Detrital sand which was topped at 6,547 feet. The hole was caving and the operators plan to cement the cave before making a production test.

On the east side of South Earlsboro Pool, the Tulsa Oil Co.'s No. 3 Gross, SE cor. SW NW, Section 24-9-5, Seminole County, swabbed 149 bbls. of oil in seven hours, from the Wilcox sand at 4,231-37 feet. This new well is located between the East Earlsboro Pool and the South Earlsboro Pool. It is a mile extension to the east in the South Earlsboro Pool, and a half mile extension to west of the East Earlsboro Pool.

Indian Territory Illuminating Oil Co.'s No. 1 C. E. Trosper, NE cor. SE, Section 11-11-3w, Oklahoma County, was completed early Monday, May 12, and was estimated to be the largest well in the north end of the pool. The first hour's gauge was 1,325 bbls. After the one-hour gauge the well was given 800 pounds back pressure and made 700 bbls. of oil the second hour, and 835 bbls. the third hour. It was allowed to produce for seven hours and made a total of 5,837 bbls. The gas was estimated at 70,000,000 feet. The oil was found in Simpson sand at a total depth of 6,554 feet.

Same operators' No. 1 H. W. Jones, NW cor. SE NW, Section 1-11-3w, on the north side of the pool, blew in Tuesday, May 13, but no gauge was available. It was estimated to be making 700 bbls. an hour from the Simpson sand.

Indian Territory Illuminating Oil Co.'s No. 4 A. Brokaw, SE cor. NE NE, Section 13-11-3w, on the northeast edge of the pool, was bailed down but bridged around the 6,000-foot level. The oil was found in the Silicious lime at a total depth of 6,396 feet. Same company's No. 4 N. Emerson, NE cor. SE SW, Section 30-11-2w, was bailing to make a production test. No. 8 N. Emerson, NW cor. SE SW, Section 30-11-2w, was also bailing. Both of these operations were in the central part of the pool. Same company's No. 4 B. Johnson, NW cor. NE NW, Section 25-11-3w, on the west side of the pool, was showing signs of producing while bailing the mud.

The production of the Oklahoma City Pool on the gauge of May 13 was 129,964 bbls. from 53 wells, producing out of a total of 225 wells completed.

Amerada Petroleum Corp. and Dixie Oil Co.'s No. 2 J. Grounds, NW cor. Section 23-9-5, in the South Earlsboro Pool, made 11,540 bbls. on the gauge of May 13, at 7 a. m. The No. 1 J. Grounds, SW cor. NW NW, Section 23-9-5, made 2,725 bbls. in 20 hours.

The 17 completed wells in the South Earlsboro Pool made a total of 18,333 bbls. on the gauge of May 13.

High Spots in Field News

GULF COAST

Dry holes, prospect failures and decreasing production indicate peak has been passed.

NORTH LOUISIANA-ARKANSAS

Oil shows reported in two deep tests in Zwolle district. Sarepta well increases interest there.

KANSAS

New high level of production in State. Voshell Pool has potential of 60,000 bbls. if swabbed.

CALIFORNIA

Curtailment program leads to renewed effort to secure lowering of production below 609,000-bbl. figure.

OKLAHOMA

South Earlsboro has 11,000-bbl. well. Old pools in Seminole area declining. New potentials discussed.

SOUTHWEST TEXAS

Pettus Field, Bee County, has 45 gravity showing. Cosden well fills 20 joints in five minutes. Deep test in Nueces.

ROCKY MOUNTAIN AREA

Showing of oil about 10 miles from production in Lea County. Hobbs Pool has 36 active operations. Utah test has show of oil with sulphur water.

CANADA

NEW YORK, May 13.—A Calgary report says a consolidation affecting principal operators south of Home section in Turner Valley Field of Alberta is forming. The merger includes Mayland Oil Co., Mill City Petroleum, Ltd., Mercury Oils, Ltd., Lowery Petroleums, Ltd., Sterling Pacific Oil Co., and Southwest Petroleum Co. The merger would take in over 2,500 acres in the field and create one of the strongest independent companies in Alberta.

TURNER VALLEY PRODUCER

CHATHAM, Ontario, May 12.—In South Turner Valley, Calmont Oils' No. 2, LSD 11, Section 20-19-2w5, which recently blew into production, has been officially measured at 42,500,000 feet open flow, with potential crude naphtha recovery of 1,000 bbls. The field's previous record producer was Royalite's No. 4, with a peak of around 30,000,000 feet, and 750 bbls. recovery.

F. E. POWELL ARRIVES

NEW YORK, May 10.—F. E. Powell, chairman of the former Anglo-American Oil Co., the stock of which has been exchanged for that of the Standard Oil Export Corp., arrived here for a brief business visit. He stated that the European oil outlook, while satisfactory at this time, depended upon the American market and the ability of the petroleum industry here to maintain stable conditions.

SCORE CARD ON OIL PRODUCTION

Below is shown allotted average daily production, April to December, inclusive, suggested by the Committee on Economics of the Federal Oil Conservation Board, and the actual daily average production during the week ending May 10:

	Allotted (bbls.)	Actual (bbls.)	Over (bbls.)	Under (bbls.)
California	610,000	634,750	24,750	.....
Oklahoma	655,000	652,635	.....	2,365
Texas	750,000	848,716	98,716	.....
Other fields	480,000	461,340	.....	18,660
Total	2,495,000	2,597,441	123,446	21,025

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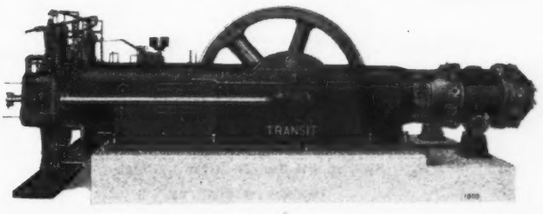

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Production Kept Down in Oklahoma

Old Pools in Seminole Area Declining but South Earlsboro Has 11,000-Bbl. Well. New Potentials Established

By W. A. Spinney
Staff Correspondent, Oklahoma Fields

Oklahoma's oil production shows another decline for the week ending May 9. The operators are keeping the daily average within the requirements estimated by the pipe line companies. The total daily average was 652,600 bbls., a decrease of approximately 6,000 bbls. daily. Activity is spreading in the Konawa district in Seminole County. Large production is being found in the 2,900-foot sand. In the other flush areas of the State new curtailment programs are being made to prorate the new wells in keeping with the present curtailment plans.

The Konawa Pool in southern Seminole County has increased its daily production from an average of 8,400 bbls. daily to 23,260 bbls. on the gauge of May 9. The large increase is mostly due to wells which, after being shut in for the proration period, are being opened for production.

The latest large well in the pool is Hilton Phillips' No. 2 Burgess, NW cor. NE. Section 29-6-6, which flowed considerable oil before bridging itself with the tools. The oil was found at 2,859-61 feet. The well blew in with such a pressure the crew was unable to get the tools out of the hole before the wire line broke, bridging the hole. It was estimated the well was capable of making 1,000 bbls. an hour. No tankage was available and until tanks are erected the well will be shut down.

The Shell Petroleum Corp.'s No. 1 Caesar, NW cor. SE SE, Section 20-6-6, is the largest producer in the Konawa Pool. The well gauged 5,027 bbls. in 24 hours, partly pinched in. The oil was found in sand at 2,930-38 feet. The new well of W. B. Pine has declined from the estimated potential of 10,000 bbls. to an actual gauge of 4,675 bbls. in 24 hours, flowing wide open. It is No. 1 Charty, NE cor. NW SW, Section 16-6-6. The well was later allowed to produce with 200 pounds back pressure and made 2,338 bbls. in 12 hours.

Independent Oil & Gas Co.'s No. 2 Okfuskee, SW cor. SE NW, Section 16-6-6, was drilled deeper and increased its production from 400 bbls. a day to 1,107 bbls. The pay horizon was found at 2,892-2,908 feet and it was later deepened to a total depth of 2,915 feet. Twin State Oil Co.'s No. 2 Charlie, SW cor. NE NE, Section 20-6-6, another one of the gusher wells in the new pool, made 455 bbls. the first hour, flowing against a back pressure of 100 pounds. The well made 5,670 bbls. in 24 hours. Mid-Continent Petroleum Corp.'s No. 1 Harjo, NE cor. SW SE, Section 20-6-6, recovered tools lost in the hole and gauged 1,690 bbls. in 24 hours. The operators were cleaning out when the tools were lost. The total depth of the well is 2,881 feet.

Big Well in South Earlsboro

Dixie Oil Co. and Amerada Petroleum Corp. completed the larger well in the South Earlsboro Pool, Seminole County. The well was drilled deeper into the Wilcox sand and gauged 11,145 bbls. in 24 hours. It was No. 2 J. Grounds, NW cor. Section 23-9-5, and was drilled from 4,210-24 feet, and plugged back to 4,222 feet, and shot with 20 quarts. The well was making 3,800 bbls. before drilling deeper.

Lower Potential in Seminole

A decline in the potentials of the older pools in the Greater Seminole area will be shown in the new gauges released May 20, from the pools that have been taking new potential gauges according to Umpire Ray Collins. These pools are the St. Louis, Maud, Mission, Carr City, Pearson and old Earlsboro Pools, which have been flowing wide open from May 1 to May 15. A decline in the potentials of East Earlsboro and East Little River Pools, is noted in the figures for May just announced by Ray M. Collins, state umpire. East Earlsboro Pool now has a potential of 92,840 bbls. as compared to 118,000 bbls. for the last period. The area is allowed to produce 33⅓ per cent of potential, minimum production to be 38,000 bbls. a day. East Little River Pool's potential is now placed at 21,900 bbls. as compared to 25,500 bbls. for the previous period. The pool is allowed to make 70 per cent of potential.

In the new flush areas in different parts of the State proration is getting an early start. Agreements have been made affecting the new pool at Chandler, Lincoln County; the new well of the Reiter-Foster Oil Corp. in western Payne County; Continental Oil Co. and Barnsdall Oil Co.'s No. 1 Brown, in southern Garfield County, and the Payne Drilling Co.'s well in Section 22-6-3, southern Pottawatomie County.

Scattered Curtailment

The present producing wells in the west Chandler area will not be restricted until after another well is completed, then all the producers will be curtailed 25 per cent of potential capacity. The Reiter-Foster Oil Corp. and Continental Oil Co. and Barnsdall Oil Co.'s wells were curtailed May 1, 25 per cent of potential. Reiter-Foster Oil Corp.'s well gauged on its potential 1,200 bbls. and is now producing 300 bbls. a day. Continental Oil Co. and Barnsdall Oil Co.'s well had a potential of 740 bbls. and is allowed to produce 185 bbls. a day.

In the Chandler area, in Lincoln County, and in Payne County, limiting of drilling activity was also included in the curtailment agreement. One test well will be drilled at a time in these areas on each 40-acre lease, the different companies taking turns, alternately, starting new tests. This method of development is expected to slow down the completion of wells and help prevent the rush of large flush production that usually accompanies a new field.

The Wanette well, in Section 22-6-3, Pottawatomie County, and all new wells in that area, will be curtailed 25 per cent of the potential production after the next well is completed.

Oklahoma City Plan

Oklahoma City operators discussed the probability of increasing the potential yield from that pool to 25 per cent from the present 16⅔ per cent, at a meeting held May 8. The following motion was voted upon and was unanimously carried:

"That no well be allowed to be deepened if in the first 24 hours, when tested, it makes 3,000 bbls. or more, until such well shall have served its full 65 days shutin time, and then only during such time as the well shall be normally allowed to produce under the proration schedule, except that any well making 3,000 bbls. or over may be deepened without time penalty, provided such well shall first be killed and not allowed to produce during such deepening period.

"That wells whose initial production shall be less than 3,000 bbls. per day shall be allowed to be deepened at any time after being tested for a total period not to exceed 15 days, with the further limitation that deepening shall stop when the production shall obtain 3,000 bbls. per day. Provided, however, that nothing in this resolution shall be construed as preventing deepening of wells with cable tools during the regular producing period, as allowed by the proration schedule.

"It is further provided that for wells deepening during a time other than their regular producing period, and which produced oil while deepening, shall be penalized in the manner heretofore agreed upon.

"That no well shall be deepened until the umpire shall first have been given notice of intention to deepen, and then only upon conformity with the rules and regulations heretofore adopted, and by this resolution adopted."

Developments in Oklahoma City

The Oklahoma City Pool produced an average of 107,110 bbls. of oil during the month of April, which was the most active month to date. Pipe line shipments for the same period were 106,097 bbls. The difference in the totals was being held in lease storage.

Early in the week a heavy rain, wind and electrical storm delayed operations, blowing derricks down and damaging slush pits. Engine and belt houses were unroofed and smoke stacks fell like straws before the wind. Practically all drilling operations were forced to suspend. The heavy rain not only shut down drilling but made many of the roads impassable. The lightning ignited a gas outlet at the Coline Oil Co.'s gasoline plant but caused little damage. In the north end of the field the North Canadian River washed out a number of roads and a number of new derrick foundations.

Work on drilling tests that were bailed down to complete was suspended when the storm struck the field. It is estimated more than a dozen wells are shut down, all of them in the proven part of the pool.

The latter part of the week the south Oklahoma City Field was recovering from the effects of the storm, and development was progressing smoothly. The production of Tom Slick Oil Co. and Anderson-Prichard Oil Corp.'s No. 6 Hoopes, NE cor. SE NE, Section 31-11-2w, in the south end of the pool, where the derrick melted down May 1, after a sudden gas blowout ignited, was turned into the separators for the first time. A new derrick had been erected and the well connected and opened for its initial gauge. The gas was estimated at more than 100,000,000 feet, and after blowing for 30 minutes the oil was turned into the lease separators. The well gauged 67 bbls. the first hour, and 1,617 bbls. the first 19 hours. The well is producing from the Simpson sand at a total depth of 6,485 feet.

J. S. Cosden, Inc. has entered the Oklahoma City Field with its first location for No. 1 McKeehan, NW cor. SW NW, Section 2-11-3w. The company has production in the Earlsboro Pool in Seminole County.

The Oklahoma City Field was the scene of more than a score of locations during the week on the north and west sides of the pool, despite the fact that production is exceeding the amount the pipe lines have estimated necessary to meet the requirements, and that some geologists express the opinion that the field may not extend beyond the present limits.

New Production Peak

Production from the Oklahoma City Field reached a new high peak on May 5, when it gauged 159,980 bbls. from 50 wells. On another day about a month ago when the Mary Sudik well was blowing wild and the Indian Territory Illuminating Oil Co. was allowed to run the pick up oil. The field that day gauged 149,911 bbls. without the picked up oil, which was estimated at 24,000 bbls.

Prairie Oil & Gas Co. and others' No. 1 Sudik, C NE NE, Section 8-10-2w, Cleveland County, was again plugged back to a total depth of 4,250 feet, and was bailed down and had more salt water. It is the fourth time the test has been

(Continued on Page 70)

WILDCAT OPERATIONS IN OKLAHOMA

(Descriptions are East and North unless marked otherwise)

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	Cleaning out 1,232 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	Rigging up standard tools 4,660 ft.; cleaning out.

BECKHAM COUNTY

Ray Johnson and J. R. Cuniff's No. 1 Brower, C NW Sec. 29-10-22w	Rig.
Producers Exploration Co.'s No. 1 Seidell, SE cor. SW SW Sec. 17-9-22w	Shut down 2,402 ft.
Carson et al's No. 1 Danby, SW cor. SE NE Sec. 20-8-22w	Shut down 1,575 ft.

BLAINE COUNTY

Lowen et al's No. 1 Unknown, NW cor. SW NW Sec. 17-16-11w	Spudded and shut down.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 12-19-10w	Drlg 2,975 ft.

CADDO COUNTY

W. J. Hartley's No. 1 Galbreath, SE cor. NW SE Sec. 29-5-12w	Shut down 3,394 ft.

CLEVELAND COUNTY

Harris et al's No. 1 Highbee, SE NW Sec. 20-6-1	Drlg. 5,540 ft.
Daniels & LeWright's No. 1 Vandever, C SW Sec. 15-7-1w	Shut down 3,130 ft.
Phillips Petroleum and T. B. Slick's No. 1 Sudick, NE cor. NE Sec. 8-10-2w	Wilcox 7,716-20 ft., water; plugging back to 5,000 ft. to test.

COAL COUNTY

Blackwell O. & G. Co.'s No. 1 L. Jackson, NW cor. Section 26-3-9	Location.
W. E. McGraw's No. 1 King, C SW NE Sec. 11-1-8e	Shut down 2,975 ft.

COMANCHE COUNTY

V. Wright's No. 1 Indian Land, SE SW Sec. 29-2-9w	Swabbed 15 bbls. 1,929-34 ft. shut down.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	Shut down 1,450 ft.
Green et al's No. 1 Wilson, C NE SW Sec. 14-1-12w	Shut down 4,055 ft.

GARFIELD COUNTY

Shell Petroleum Corp.'s No. 1 Loomis, C NW NW Sec. 32-23-4w	Drlg. 5,561 ft.
Continental and Barnsdall's No. 1 Brown, CNL SW Sec. 10-20-4w	Flowed 725 bbls.; total depth 5,973 ft.; plugged back to 5,960 ft.; shot from 5,840-60 ft.; 40 quarts; 735 bbls.
E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	Fishing 5,580 ft.

(Continued on Page 146)

Beware of a license contract under which you pay all in the beginning and which may leave you in the lurch in the end

It is usually good policy to pay for what you get as you get it

But if you do pay all in the beginning, be sure you won't have to pay again to someone else in the end

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Production in Kansas is Increasing

New High Level for the Year Reached in Past Week. Voshell Pool Has Potential of 60,000 Bbls. If Swabbed

By W. A. Spinney
Staff Correspondent, Kansas Fields

Oil production in Kansas for the week ending May 9 reached a new 1930 peak when the daily average was 126,850 bbls. The increase is more than 1,000 bbls. a day over the previous week. Part of this increase is in the Ritz Pool, in McPherson County, where curtailment was changed May 1, from 50 bbls. per well to 50 per cent of potential. A meeting of Schurr Pool operators is to be held May 16, when it is expected the present curtailment plans will be changed and the drilling restrictions lifted.

Another location has been made in the Schurr Pool by C. B. Davis in the SW cor. NW, Section 22-20-10w, Rice County, a quarter of a mile east of the present production.

The new well which extended production in the Schurr Pool, in Rice County, was drilled deeper, which increased its flow. The well, Allison & Fitzwilliam's No. 1 Mezger, SW cor. SE NE, Section 21-2-10w, almost doubled its yield after deepening 2 feet. The total depth was 3,355 feet, corrected. It was swabbing 75 bbls. an hour while formerly it was making 40 bbls. an hour from a total depth of 3,353 feet. The first two hours it swabbed 175 bbls. The test was then drilled to a total depth of 3,366 feet where it swabbed 745 bbls. in nine hours. Owners estimate with deeper drilling the well may produce 100 bbls. an hour. The oil is believed to be coming from a broken sand. The formation is somewhat different from that in the discovery well and its three offsets, all of which are producing from a brown limestone.

A town lot drilling campaign may develop at Raymond, in Rice County, a short distance south of the production in the Schurr Pool. A new location was announced on the Raymond Townsite in the northwest part of the town. Braden & McClure are expected to start the test on the Groverly land, in SW Section 27-21-10w. The Burgher Oil Co.'s No. 1 Fair, SE cor. NE NE, Section 14-21-10w, Rice County wildcat, was drilling at 4,000 feet with nothing showing. The test is in the Silicious lime and little is expected from the test in the way of oil and gas.

Two large wells were added to the Voshell Pool, in McPherson County. One was a gas well and the other swabbed 100 bbls. an hour. Prairie Oil & Gas Co.'s No. 3 Krehbiel, NE cor. SE, Section 4-21-3w, had 20,000,000 feet of gas at 3,064 feet. It may be bradenheaded and the test drilled deeper. Independent Oil & Gas Co.'s No. 1 Moorehouse, SW cor. NW SW, Section 3-21-3w, extended production a quarter mile north when the well made 100 bbls. an hour from the Wilcox sand at 3,395-97 feet. These two new wells make the north end of the pool attractive to operators holding acreage on that side of the pool.

Skelly Oil Co. is moving crude oil through its new pipe line in the Voshell Pool. The oil is piped to a loading rack at Elyria, where it is shipped in tank cars to the refinery at Eldorado.

In the north end of the Voshell Pool, the Sinclair Oil & Gas Co.'s No. 3 Moorehouse, SE cor. NE SE, Section 4-21-3w, McPherson County, encountered an estimated 8,000,000 feet of gas in chat at 2,992-3,040 feet. The gas will be bradenheaded when the 6-inch casing is landed. It an unusually large volume of gas to be found in wells in the Voshell area. The wildcat test south of the Voshell Pool was shut down. It was drilled by Helmerich & Payne and was No. 1 Kaufman, in Section 22-21-3w. After drilling to a total depth of 3,415 feet, a showing of water was encountered.

Voshell's Big Potential Production

The potential gauge of the Voshell Pool, in McPherson County, is estimated at 60,000 bbls. daily if swabbed, but the potential, when the production is pumped (the method now being used under proration), is 30,000 bbls. daily. Operators have agreed not to install air or gas lift. The pool now has 50 completed wells which average better than 1,000 bbls. per well, on the swabbing test. E. W. Marland Co., Inc.'s No. 2 Morehouse, NW cor. SW NW, Section 3-21-3w, extended the production one location north in the Voshell Pool. The well swabbed 280 bbls. the first five hours from the Silicious lime at 3,407-18 feet. The new well is estimated at better than 1,000 bbls. a day when completed.

Rush Surrounded by Production

Rush County, which is among the potential oil districts in western Kansas is surrounded by production, on the north by Ellis County and northeast by Russell County, east by Barton County and west by Ness County, which is the most westerly oil producing county in the State, while in the south it borders Pawnee County. The area is not being overlooked by oil operators and many believe it has possibilities. The recent gas discovery in Section 11-18-16w, Rush County, by Morgan & Flynn and others gauged 20,000,000 feet. The well is being connected to a pipe line near Otis by the Western Gas Co.

McPherson Oil & Gas Co. has purchased the gas rights in the block and has announced two new locations. One is in the C SW, Section 2-18-16w, which is expected to be started at once. The other location is in C SW, Section 11-18-16w. The above tests will be drilled by the Syndicate Oil & Gas Co. which owns an interest in the block. The structure was mapped and recommended several years ago as having possibilities.

Other locations in the area were made by the Central Commercial Oil Co. and Shell Petroleum Corp. in the C NW, Section 24-17-16w, north of the gas well. Rush Petroleum Co. has a location in the NW cor. NE SE, Section 16-19-14w, Barton County, on a large block.

In the new Simpson sand area west of Augusta, Butler County, a new test was announced. The further testing of the trend, which was discovered by the Aladdin Petroleum Co. several months ago is announced by the same company and others for No. 1 Metzger, C NW SE, Section 23-28-3, Butler County. The location is on a block of about 2,000 acres south of the Aladdin Pool, on which a favorable geological report was obtained. Other companies interested in the test are Phillips Petroleum Co., Salt Mount Oil Co. and Empire Oil & Refining Co.

In the western part of Russell County, Empire Oil & Refining Co.'s test swabbed 130 bbls. in three hours. Oil was encountered in conglomerate at 3,300-09 feet. The well is No. 1 Dillner, NW cor. Section 36-13-15w, west of Russell. The nearest oil production in the county is the Graham Pool, 3 miles west, in the south edge of the old Russell Field.

Neosho Oil & Gas Co., a new concern, has been incorporated to develop a block of acreage in Neosho County, in southeastern Kansas. The company has 1,350 acres on which it has eight gas wells.

Another test is expected to be completed in the area north of Wellington in Sumner County, where the wildcat test of Slick, Pryor & Lockhart and others, on the Peasel farm in Section 33-31-1w, was making 90 bbls. a day from chat at 3,353-68 feet. The well was plugged back after finding water in the Silicious lime. The new test expecting to reach the chat formation is the Sinclair Oil & Gas Co.'s No. 1 Kamas, SW cor., Section 28-31-1w, Sumner County. It was rigging up standard tools at a total depth of 3,665 feet, offsetting the producing well.

Three offsets were started around the new well of Sullivan & Melrose and others, northwest of Augusta, in Butler County; same company's No. 1 Newcome, NW cor. SE, Section 6-27-4; E. W. Marland Co., Inc.'s No. 1 Anderson, SW cor. NE, Section 6-27-4; Tidal Oil Co.'s No. 1 Corbin, SE cor. NW, Section 6-27-4. The discovery well is producing around 360 bbls. a day, from the pay horizon at 2,924 feet.

In the southwestern part of Barber County, Skelly Oil Co.'s wildcat test was drilling deeper after encountering a showing of oil near 5,250 feet, but had no increase on drilling ahead. The last report showed the test drilling at 5,454 feet.

Another oil test was started on the east edge of Wichita, during the week, Fisher & Lauck's No. 2, SW cor. SE, Section 19-27-2, Sedgwick County. The same operators drilled the discovery well about 500 feet southwest which is still pumping about 135 bbls. a day. The initial production of the well was 115 bbls.

State Line Pools

South of Caldwell, in Sumner County, another location was announced for a test in the State Line Pool. The location is the Gypsy Oil Co.'s No. 2 Enderud, NW cor. SW, Section 16-35-3w, northwest offset to the same company's No. 1 Enderud, which is producing about 850 bbls. a day, and is the largest producer in the pool. The same operators drilled the discovery well, which established a remarkable record until the offsets were completed, but is now making only 10 bbls. a day. On the Oklahoma side of the pool, the Dixie Oil Co. and Amerada Petroleum Corp.'s No. 1 Clark, was pumping 115 bbls. a day.

A new semiwildcat test for the Winfield area was announced by Tom Fine. If the new test proves productive at the southwest edge of Winfield it may be an indication that oil underlies the city of Winfield, the county seat of Cowley County. An oil pool has already been found productive on the north side of the city. The new test is No. 1 Boyd, NW cor. NE, Section 32-32-4, on the west side of the river. It is expected to be drilled to the Simpson sand horizon. The area surrounding the new test has been promising for some time since several other tests drilled south and southwest encountered Bartlesville sand with showings of oil and gas.

The showing of oil found by the Transcontinental Oil Co. and Cheney's No. 1 Wassell, NE cor. SE, Section 36-20-9, Chase County wildcat, indicates the possibility of further exploration in that area. Bird, Hanley & Sheedy, Transcontinental Oil Co. and Empire Oil & Refining Co. and others have been hoping to establish the Bartlesville sand trend. The Transcontinental Oil Co.'s No. 1 Wassel, although a failure had a showing of oil at 2,345-60 feet and total depth was 2,591 feet. The sand was shot with 5 quarts and an increase in oil was noted. It however did not make a commercial well. Operators in the southwestern and western part of Lyons County and eastern Chase County are trying to trace the trend from the Hughes Pool, in Lyons County, by drilling tests to the north and northwest.

Butler County

Noble & Jones made location for No. 1 Oursler, C SW NE, Section 4-23-4. Sullivan and others staked location for No. 1 Newcomb, NW cor. SE, Section 6-27-4. E. W. Marland, Inc., made location for No. 1 Anderson, SW cor. NE, Section 6-27-4. Tidal Oil Co. has made location for No. 1 Carbin, SE cor. NW, Section 6-27-4. Martin and others' No. 1 Flanagan, SW cor. SE SW, Section 29-27-3, has been abandoned at 3,203 feet. Sullivan & Melrose's No. 1 Gelwick, NE cor. SW, Section 6-27-4, has been completed for 350 bbls. in sand 2,924-27 feet.

Chase County

Chase County Pipe Co. is moving in for No. 1 Meirhoff, C SW NW, Section 31-19-6. Transcontinental Oil Co. and others' No. 1 Wessell, NE cor. SE, Sec-

(Continued on Page 128)

WILDCAT OPERATIONS IN KANSAS

(Descriptions are East unless otherwise marked)

BARBER COUNTY

Company, farm and location—	Remarks:
Skelly Oil Co.'s No. 1 Temple Ranch, SW NE Sec. 13-34-15w	Drlg. 5,338 ft.
Phillips Pet. Co.'s No. 1 Powell, SE cor. SE Sec. 11-32-10w	Shut down 4,023 ft.

BUTLER COUNTY

T. C. Johnson's No. 1 Heath, NE SE Sec. 12-27-3	Rig.
Elam et al's No. 1 Hopkins, SE SW SE Sec. 26-23-4	Drlg. 700 ft.
Joe Liggett's No. 1 Guanther, C SE NE NW Sec. 29-26-7	Shut down 50 ft.
Martin et al's No. 1 Flanigan, C SW SE SW Sec. 29-27-3	3,165-85 ft. water; total depth 3,203 ft.; abandoned.

CHASE COUNTY

Chase County Gas Co.'s No. 1 Weirhoff, SW NW Sec. 31-19-6	Rig.
Transcontinental & Cheney's No. 1 Wassel, NE SE Sec. 36-20-9	2,354-95 ft. water; total depth 2,571 ft.; abandoned.
Urschell et al's No. 1 Lippa, C SW SW Sec. 27-18-6	Drlg. 2,020 ft.
Steinbuckel et al's No. 1 Stephenson, NE SW Sec. 4-20-6	Drlg. 1,700 ft.
Steinbuckel et al's No. 1 Cook, SE cor. Sec. 21-19-8	Drlg. 2,560 ft.

CHAUTAUQUA COUNTY

Valentine Oil Co.'s No. 1 Patterson, NW SE SW Sec. 2-33-9	Shut down 1,690 ft.

CLAY COUNTY

Chrisler et al's No. 1 Tivier, SW cor. Sec. 19-8-3	Shut down 50 ft.

COFFEY COUNTY

Kimsay's No. 1 Baker, SE cor. Sec. 24-22-13	Shut down 50 ft.

COWLEY COUNTY

Tom Fine's No. 1 Boyd, NW NE Sec. 32-32-4	Rig.
Roth & Faurot's No. 1 Adams, C SW NE NE Sec. 19-32-8	Fishing 1,825 ft.
Prairie O. & G. Co.'s No. 1 Dosbaugh, SE cor. Lot 27, Sec. 18-32-8	Shut down 2,882 ft.

DICKINSON COUNTY

Severs et al's No. 1 Lavengood, NE SW Sec. 13-13-2	Drlg. 50 ft.
Emery-Curtis & Bryan's No. 1 Hevner, NW SE Sec. 31-13-3	Shut down 2,365 ft.
Cross' No. 1 Sanden, NE cor. Sec. 12-15-2	Rig.

Fast Work of WILSON Arc-Welders *Saves Costly Delay*

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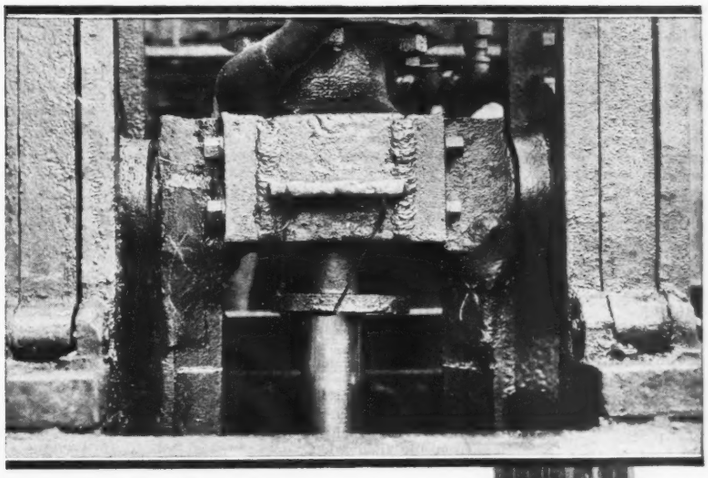
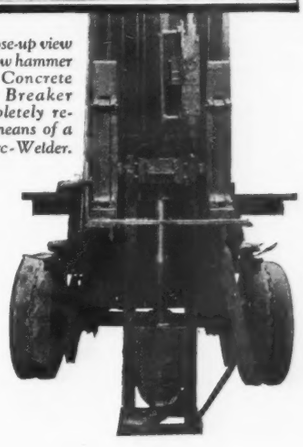


hammer guide. If it had not been for the quick and efficient method of your arc welding job, it would have meant quite an expensive delay, not only to us, but to the well-regulated paving crew. * * We certainly must admit that electric arc welding has saved us a lot of expensive delays and made a good permanent repair." — *Chicago Concrete Breaking Company.*



Above: Close-up view showing how hammer guides on Concrete Pavement Breaker were completely repaired by means of a Wilson Arc-Welder.

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WELDING MACHINES AND WELDING WIRE

Pettus Area Test Has 45 Gravity Show

Cosden Well Fills 20 Joints in Five Minutes. Is 300 Feet Shallower Than Producers to East. Deep Test in Nueces County

By B. D. Stevenson
Fort Worth Bureau, The Oil and Gas Journal

SAN ANTONIO, Tex., May 12.—Cosden & Co.'s No. 1 McKinney, a mile west of the town of Pettus in Bee County, on a drill stem test at a little below 3,600 feet filled 20 joints of 45 gravity oil in five minutes. The well is about 300 feet shallower than the producing wells which are about 2½ miles due east of it. Whether it is higher on structure or in a different sand than the wells in the field seemed not to have been settled at last reports. Considerable of the Jackson formation in which production is had in that field is believed to have been eroded away. The test of the Cosden well makes the Grayburg (Fisher & Wiggins) test some distance to the southwest look a little better as it is about in line. Simultaneously with that affair T. B. Slick was closing a deal for 200 acres of the George A. Ray land at the southwest corner of townsite of Pettus for a consideration of $50,000.

Rowan & Tong's No. 1 Massengale, a little less than a mile west of Cosden's No. 1 McKinney, at 3,760 feet, was in a sand that looked as though it might do something, but resulted in failure.

One must study a map to get the significance of things. The 200 acres purchased by Slick is immediately west of the Houston Oil Co.'s No. 1 Portis which failed to get the same producing sand as in the discovery well of the field and has been abandoned at 5,000 feet. It is north of Morgan's No. 1 Ray. The Houston Oil Co.'s No. 1 Portis in the middle and the five producing wells of the field at the northeast are all in a line. Evidently the theory is that Morgan's No. 1 Ray and Houston Oil Co.'s No. 1 Portis were too far to the south and out of the line of production. The field amounts to five producing wells at around 3,900 feet and if it is going to be any kind of a field and more than a pimple it looks like production would run through the townsite of Pettus.

The Rowan & Tong and Cosden tests are at right angles to the structure, if the structure there is anything like the narrow structures of the Balcones Fault zone. They are northwest of the structure and the dip is to the southeast. The Rowan & Tong test is the farthest northwest. The Cosden well is 300 feet shallower than the producers and the other 200 feet.

Union Producing Co. has started its No. 9 Ray and Humble Oil & Refining Co. its No. 3 McKinney, offsets, and between producers in the proven field.

Northeast of Bruner

Things were still uncertain as to H. S. Morgan's No. 1 Perry, northeast of the Bruner production in the John D. Rains Survey. It topped the Edwards at 2,744 feet with an elevation of 416 feet and it seems pretty certain will make a well. There have been several big surprises in the Luling area in recent months when oil men thought a well would be one thing and it came in another. So-called crevice wells have given up big record breaking production when they were thought small.

The Gulf Production Co. which completed its No. 1 Trap Briscoe for 300 bbls. has made another location to the west of it. Its No. 1 is directly on a line between H. S. Morgan's No. 1 Perry and the nearest production in the field, about 2,000 feet from the nearest Humble producer on the southwest and about 3,000 feet from Morgan's No. 1 Perry on the northeast. The new location, also on Trap Briscoe land, is in the southeast corner of the R. P. McCarley Survey, a little less than 2,000 feet to the west of No. 1 Trap Briscoe.

Darst Creek Area

Other than the completion of five fairly good producers in the Darst Creek Field that territory disclosed nothing of unusual interest. Empire Gas & Fuel Co.'s No. 2 Knoblock lost returns at 2,633 feet. It is supposed to have got the Austin at 2,610 feet which is considerably too low. It is off to the west edge of the present production but close to its No. 1 Knoblock which is a producer. It looks much more likely to add to the knowledge of geology of the field than to production.

W. H. Gee is starting a test a little farther west than anything yet. It is in the A. S. Emmett Survey, 2,650 feet from the west line and 3,350 feet from the south line of the survey.

Going in the other direction from the field Trigg's No. 1 Warren in the John H. Burnham Survey, a mile southeast of the line of production, has been abandoned dry at 2,913 feet in the Edwards.

To complete the circle of the field T. C. Hadley's No. 1 Hartwig southwest of the Darst Creek Field and in a direction from the field where operators are expecting some one to bring in a new pool, has rigged up and completed a water well and is ready to begin drilling.

Laredo Territory

French Oil Corp. last week got a showing of oil on a drill stem test in its No. 1 Rosa Benavides in Survey 659 in the Cole Pool in Webb County, in sand at 2,344-52 feet. It is probably the most important happening of the week in that territory which reported a couple of new oil wells, one in the Schoolfield-O'Byrne Pool in Duval County and one in the Cuellar Pool in Zapata County.

Location of the French Oil Corp.'s No. 1 Benavides is in the northwest corner of Survey 659 in the northwest part of the Cole area and is only a little over one location from the Magnolia Petroleum Co.'s No. 2-C Benavides, the first oil well in that part of the field. Cole Petroleum Co. opened up that part of the country to both oil and gas production with the discovery well in Survey 412. The oil pool ran north for a distance and then completions were all gas wells till the Magnolia brought in an oil well in the center of the southwest 40-acre tract in Survey 662, its No. 2-C Benavides. The new well by French is the first to be drilled that showed oil since then.

SOUTHWEST TEXAS

Branyon	25
Bruner	20,374
Buchanan	263
Dale	348
Darst Creek	22,430
Kingsville	114
Larremore	28
Luling	10,010
Lytton Springs	858
Manford	525
McMullen County	35
Medina County	22
Mirando	10,380
Pettus	2,586
Somerset	1,545
Taylor	526
Yoast	510
Total Southwest Texas	70,579
Week ending May 3	62,436
Increase	8,143

Cole Field

Some more hole was made in the two deep tests in the Cole Field but nothing of real importance has been announced. Cole Petroleum Co. is now drilling at 3,961 feet in its No. 68 Benavides up toward the center of the field and O. W. Killam is drilling at 3,875 feet in his No. 18 Bruni. These two tests are being watched from week to week because they are both being drilled for the purpose of finding what, if anything, is in the deeper sands of the field. It has been an idea in the Cole Petroleum Co. for some time and the understanding is the company will test its entire acreage which is a large block.

More Deep Holes

There have been more deep holes (beyond 4,000 feet) drilled or started in the Southwest Texas territory within the past 18 months than for all record. It seems to be thoroughly in the minds of operators to keep going and wells are planned and financed on the deep theory.

In Nueces County in the Agua Dulce Field Houston Oil Co. is to drill its No. 1 M. E. Brooks to around 5,000 feet. It is now down 1,930 feet, not quite to the depth of the producing sand of the field.

Shell Petroleum Corp. is getting up a block in western Nueces County east of the Agua Dulce Field in wildcat territory. There is a great deal of interest in that part of the county and wildcat acreage is bringing offers of around $4 an acre. The Gulf Production Co. and Humble Oil & Refining Co. have been in there leasing also. The Shell seems to have the most acreage, having acquired around 16,000 acres within a week's time, following some geophysical work.

Development in Kendall

There is to be a lot of development in Kendall County. Sterling has not yet completed building storage to pump and test his No. 1 Willie Werner but things are moving that indicate there is to be a lot of development work in that county. The Pennsylvania formation and the showing in the Sterling well are partly responsible.

One of the evidences of development is the fact that some company is building a big warehouse to store its material which is a characteristic first step of a big company before doing an elaborate amount of research and drilling. Also it is announced that Guy Miller of San Angelo will drill four tests in the territory in the center of the county between the Guadalupe River and Kendalia. Although the Sterling test was practically the first ever drilled in the county, that and a study of the territory since has created great interest and much wildcat news can be expected from that county.

Victoria County

Humble Oil & Refining Co.'s No. 3-A J. J. Welder, deep test in the Nursery shallow gas field has reached a depth of 6,900 feet where a continuation of heaving shales has made it almost impossible to proceed with the deepening of this hole. It is very doubtful that this hole will be carried deeper. A perforated liner is again being run to make another test of the oil and gas showing had in this test at about 5,900 feet. If this test fails to develop it is the present intention of those in charge to abandon this test.

DeWitt County

Republic Production Co.-Simms Petroleum Corp.'s joint test on the E. T. Clark farm, 4 miles south of Yorktown in the Jose Santos Survey, is making fast time and has reached a depth of 3,200 feet. The contract depth of this well is 4,000 feet. Newton Drilling Co. is drilling the well. The test is now drilling in sandy shale.

H. T. Roe and others' No. 1 Linhart, just northeast of Cuero in the D. J. Bibb Survey, has reached a depth of 2,015 feet and will install an additional boiler before drilling operations are again resumed.

The lease play started at the Morgan Oil Corp.'s No. 1 McKinney on the Bee-Karnes County line and running through eastern Karnes County particularly to the east of Runge has continued on through DeWitt County with the Louisiana Oil & Refining Co., Republic Production Co.-Simms Petroleum Corp.-H. T. Rowe tests along this line. That commanding the highest price is still in the southwestern part of DeWitt County around Myersville and under the Shell Petroleum Corp.'s block which was taken on geophysical work and is now being core drilled. Both methods of examination are said to have disclosed a high and on the strength of reports that one of the core tests encountered a good oil show at less than 1,000 feet royalties under 10-year commercial leases have

(Continued on Page 123)

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

ATASCOSA COUNTY

Company, farm and location—	Remarks:
Frontier Oil Co.'s No. 1 Gray, 425 ft. from S line, 2,586 ft. from W line of 902-acre tract in the N. Flores Sur., 3 miles SW from Somerset Field	T. D. 2,073 ft.; drlg. in Anacacho.

BASTROP COUNTY

Pacific Oil & Gas Co.'s No. 3 J. Spooner (450-ac.), 100 ft. E of No. 1 in the L. Leverance Sur.	Dropped from reports.
B. L. Batts et al's No. 1 A. A. Alexander, W. M. Eastland Sur., 4,190 ft. to NW line, 1,320 ft. to SW line of Sur.	T. D. 1,360 ft.; temp. abandoned.

BEE COUNTY

Nichols Oil Corp.'s No. 3 Hicks, 500 ft. N-S line, 500 ft. E-W line of Blk. 19, just S of Normanna, 350 ft. SE of No. 2 Hicks discovery	T. D. 3,302 ft.; drlg. in broken shale.
Cosden Oil Co.'s No. 1 R. A. McKinney, 150 ft. from S and E lines of McKinney 350-ac. in N part of S. John Pace Sur., 1 mile W from Pettus	T. D. 3,050 ft.; drlg. in shale.
Rowan & Tong's No. 1 F. O. Massengale 350-ac., 150 ft. from S line, 3,184 ft. from W line of tract and survey, north John Pace Sur., 1½ miles W from Pettus Townsite	T. D. 3,733 ft.; drlg. in sandy shale.
Ed Price's No. 1 Mrs. Laura E. Weiss, 200 ft. out of NW cor. of B.&B. 640-ac. Sur., E of Normanna, 6 miles W of Blanco Creek, in the B.&B. Sur.	T. D. 1,240 ft.; drlg. in gumbo.
Houston Oil Co.'s No. 1 J. F. Portis 288.3-ac., 1 mile SW of No. 1 McKinney, in the A. Smalley Sur.	T. D. 5,000 ft.; dry and abandoned.
Fisher & Wiggins' No. 1 A. J. Kimbell, C 189 acres in the Stephen Winship Sur.	T. D. 3,175 ft.; drlg. sandy shale.

BROOKS COUNTY

Houston Oil Co. of Texas' No. 1 Wormser-Holbien, 1,550 ft. S, 2,650 ft. E of intersection of Lisandro Saenz & Manuel Saenz tracts, El Palo & Blanco de Maguellas grant, SW of Lasater discovery gas	Location.
Humble Oil & Ref. Co.-Shell Pet. Corp.'s No. 2 Wm. Singels, 1,320 ft. W of E line, 1,800 ft. S of N line of Sec. 312, Alta Verde area, 7 miles SE from Lasater gas field	T. D. 560 ft.; preparing to run surface csg.

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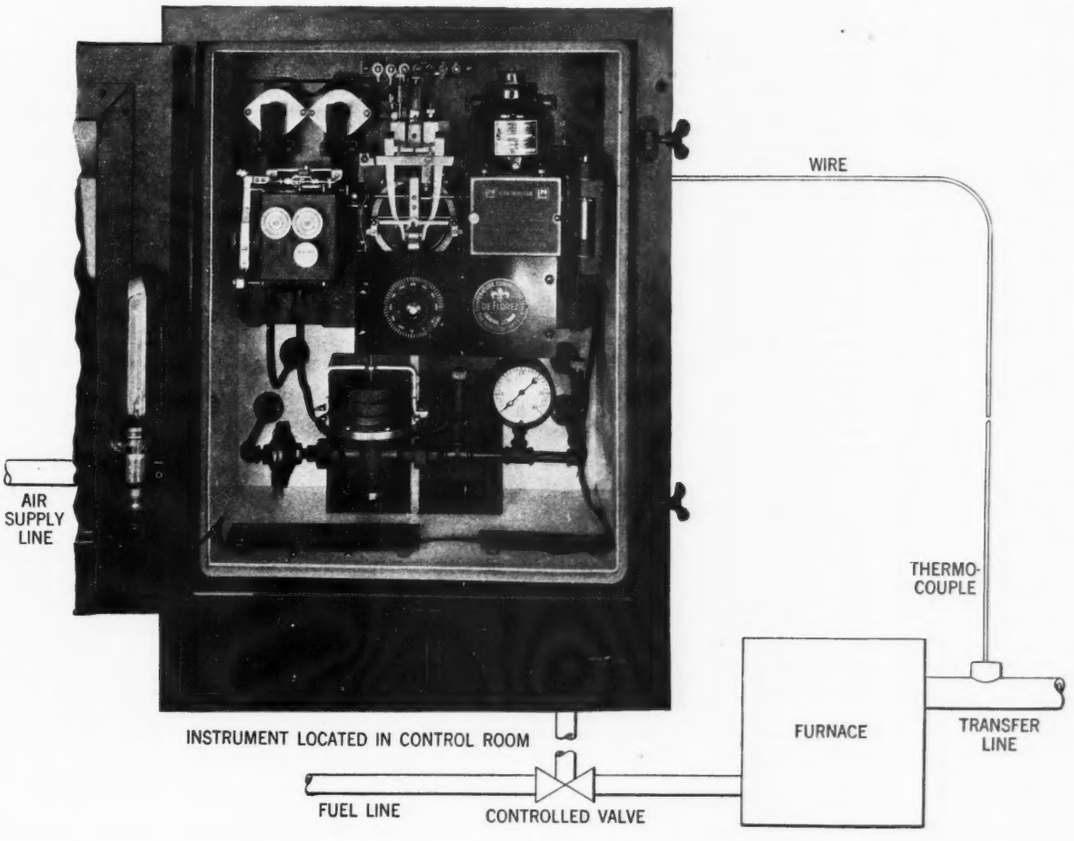

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Interest Is Revived in Sabine Field

Loring Oil Co. and W. G. Gray Reported to Have Found Shows of Oil in Two Deep Tests in the Zwolle District of That Area

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., May 12.—Reports of oil showing in two deep tests in Zwolle, revived lagging interest in the Sabine Field last week just as three better than usual producers did in Carterville, and a well flowing 350 to 500 bbls. of fluid about half oil with 5,000,000 feet of gas in the Sarepta district of Webster Parish attracted attention to an area in which there is growing activity. Mississippi, prominent in the news for the last three weeks, was out of the picture temporarily.

Loring Oil Co.'s No. 5 Bowman-Hicks, Section 34-8-12, one of three deep holes drilling in Zwolle found a break in the chalk at 3,196 feet, drilled 4 feet, got a show of oil and cored to 3,205 feet. Meanwhile W. G. Gray is reported to have had a show at around 3,700 feet in No. 1 Knowlton a semiwildcat in Section 6-7-12, south of the west end of Zwolle production and to have set 4½-inch. This well is the deepest in the district so far, though Loring Oil Co. is scheduled to go 6,000 feet in No. 5 Bowman-Hicks and No. 1 Peavy-Wilson, a wildcat in Section 21-6-13, several miles south of Blue Lake production. This latter is drilling green sand at 816 feet after setting a string of 15½-inch for surface casing at 150 feet. The same companys No. 2 Bowman-Hicks, Section 3-7-12, a quarter mile south of the discovery well, pumped 75 bbls. initial after standing for a month with 300 feet or so of oil in the hole from a total depth of 2,725 feet and R. L. Burch's No. 1 Barnett, Section 31-8-12, a townsite well, pumped 35 bbls. from 2,458 feet.

Two Wells Come Back

Loring Oil Co.s No. 1-A Bowman-Hicks in Section 34-8-12, which went dead April 27 and was off production for 10 days, came back with 1,200 bbls. the first 24 hours after it started flowing and increased to a little better than 1,600 bbls. the next 24 hours. Ohio Oil Co.'s No. 2 Bowman-Hicks a mile southeast in Section 33, which went dead at the same time, also came back. When it stopped flowing at the same time the Loring well went dead it was making around 300 bbls. but the first 24-hour gauge after it started flowing again it did 400 bbls.

G. H. Broderick's experience with No. 1 Bolin, Section 31-8-12, shows a different phase of the picture. Burnham and others' No. 1 Bolin, an offset, was a failure at 2,436 feet and was shot with 100 quarts at 2,256 where a show had appeared during drilling. Broderick's well had been doing approximately 400 bbls. but immediately after the shot in the offset fell to 200 bbls.

Pelican Natural Gas Co.'s No. 1 Louisiana Long Leaf Lumber Co., 4 miles east of production and a tentative extension for that distance, pumped 30 bbls. in the first 12 hours from 2,425 feet and was taken off to pull rods and clean out, so just what sort of well it is remains to be seen.

While Philp Brothers' No. 1 Dow in Section 31-8-12 was drilling at 1,438 feet the pot got too big a head on or for some other reason not determined, blew up and lifted itself several yards for a new location on the opposite side of the road from the rig. The new location was an ancient model of a small automobile parked just off the road while the owner was working on the bands. There was not much left of it but the owner escaped unhurt. The boiler in its flight had turned upside down and the dome landed in the back seat of the automobile.

Remains Unknown Quantity

Like Pelican Natural Gas Co.'s tentative eastern extension of Zwolle, R. L. Gay's No. 7 Bowman-Hicks, Section 14-7-14, a tentative western extension of Blue Lake proven area, remains an unknown quantity. It has been standing full of oil from 2,575 feet for three weeks and probably will not be put to pumping until Gay's return from Rochester, Minn., where he placed his brother in the Mayo Clinic in which he himself was a patient a month ago. H. S. Autrey's No. 1 Long-Bell in Section 35-8-14, 3½ miles north of Blue Lake production, tested dry at 1,970 feet and is drilling at 2,200 feet.

Bridges-Clark Oil Co.'s No. 2 Guy, Section 33-10-12, Pleasant Hill district semi-wildcat, had a show of gas with salt water at 2,427-32 feet and at 2,447 feet is temporarily abandoned. Its No. 1 Cook, Section 3-9-12, completed last week at 3,306 feet making 20,000,000 feet of gas with 1,000 bbls. of salt water and No. 1 Gay in the same section which had 24,000,000 feet of gas at 3,276 feet, will be the source of supply for a 4-inch line to Many, 20 miles south, where Tooke & Reynolds have obtained a franchise.

Seven completions in Carterville developed 640 bbls. initial from three wells and of the four abandoned, one was a location. Arkansas Fuel Oil Co.'s No. 1-B Barnette, NW NE, Section 36-23-11, flowed 190 bbls. through tubing from 3,161 feet. No. 3 Bollinger, Lot 26, Section 38-23-11, had salt water from 3,487-89 feet and was abandoned at 3,497 feet, about as deep a hole as has been drilled in Carterville and appears to have missed oil sand altogether though there has been some production east and southwest. No. 4 Bollinger in Lot 14 of the same section, a half mile northeast of No. 3, also was a failure, salt water with a trace of oil at 3,270 feet. No. 5-B Kilgore in the NE NW, Section 31-23-12, came in flowing 200 bbls. of oil from 3,165 feet.

Phillips Petroleum Co. tested dry and abandoned No. 1 Bolin, Lot 16, Section 30-23-11, at 3,194 feet and abandoned location for No. 1 Floyd in the NE SW, Section 25-23-12. The Texas Company's No. 6 Wilkinson in the SE NW, Section 36-23-12, flowed 250 bbls. of oil through 2-inch tubing from 3,168 feet.

Production

A drop of 1,025 bbls. in daily average runs from the DeSoto-Red River producing areas negatived increases in the other light oil areas and left total runs from the division for the week practically what they were the week before. Daily average runs from the field for the several districts were:

NORTH LOUISIANA	
Caddo, light	9,830
Caddo, heavy	2,870
Homer	3,560
Haynesville	4,510
DeSoto-Red River	3,100
Elm Grove	410
Bellevue	650
Cotton Valley	2,160
Urania	5,380
Pleasant Hill	635
Sarepta-Carterville	3,620
Zwolle	3,570
Holly	835
Total North Louisiana	41,150
Last week	40,885
Increase	245
ARKANSAS	
El Dorado	4,080
Smackover, light	5,310
Smackover	40,225
Stephens	950
Nevada County	970
Lisbon	1,605
Champagnolle	4,110
Bradley	80
Mount Holly	120
Urbana	1,000
Total Arkansas	57,850
Last week	58,050
Decrease	200
Total North Louisiana and Arkansas	98,980
Last week	98,935
Increase	35

Holly District Well Abandoned

The first completion in the Holly district of DeSoto Parish since R. O. Roy completed the discovery producer in Section 5-13-13, last month came last week when Arkansas Fuel Oil Co. abandoned No. 1 Scott in the SE NW, Section 32-14-13, a half mile north of Roy's producer, on account of salt water, at 3,175 feet. Several tests had been made, but neither showed any oil at 2,816, 2,915 and 2,989 feet. Roy's well was completed at 2,880 feet. However, Arkansas Fuel Oil moved 1,380 feet east and is rigging up to drill No. 2 Scott in the SW cor. SE NE of the same section and Roy has derricks up for No. 1 Brooks in the NE NW, Section 8-13-13, and No. 2 Tracy in the NW SW, Section 5-13-13 and has locations staked for No. 1 Fuller & Canard in the NE SE, Section 6-13-13 and No. 1 McGee in the SE NW, Section 8-13-13. The four new jobs make 11 completions in all he has under way. He has taken No. 1 Fuller, Section 6-13-13, completed in August, 1928, as a 20,000,000-foot gas well at 2,827 feet, off the line through which Mansfield was getting part of its fuel supply and will use it entirely to maintain pressure on

(Continued on Page 128)

LOUISIANA-ARKANSAS PROVEN AREAS

NORTH LOUISIANA
BOSSIER PARISH—CARTERVILLE

Company, farm and location— Remarks—

Ark. Fuel Oil Co.'s No. 2-A Barnett, 330 ft. N, 330 ft. W, SE cor. W½ SE SE, Sec. 25-23-12.....Began drlg. May 2; cmtd. 10-in. 242 ft.

Ark. Fuel Oil Co.'s No. 2-B Barnett, 330 ft. N, 330 ft. W, SE cor. NW NE, Sec. 26-23-12.....Began drlg. May 3; cmtd. 10-in. 230 ft.

Ark. Fuel Oil Co.'s No. 3-A Kilgore, 330 ft. S, 235 ft. E, NW cor. SE SW, Sec. 30-23-11.....Swabbing; T.D. 3,135 ft.

Ark. Fuel Oil Co.'s No. 4-A Kilgore, 100 ft. N, 1,330 ft. E, SW cor. SE SW, Sec. 30-23-11.....190 ft. oil; W.O.S.R.; T.D. 3,133 ft.

Ark. Fuel Oil Co.'s No. 4-B Kilgore, 200 ft. N, 300 ft. E, SW cor. NE NW, Sec. 31-23-11.....Swabbing; T.D. 3,175 ft.

Ark. Fuel Oil Co.'s No. 6-B Kilgore, 330 ft. S, 330 ft. E, NW cor. NE NW, Sec. 31-23-11.....Drlg. 2,640 ft.

Ark. Fuel Oil Co.'s No. 7-B Kilgore, 330 ft. S, 990 ft. E, NW cor. NE NW, Sec. 31-23-11.....Began drlg. May 3; cmtd. 10-in. 256 ft.; drlg. 2,640 ft.

Ark. Fuel Oil Co.'s No. 8-B Kilgore, 330 ft. N, 1,520 ft. E, SW cor. NE NW, Sec. 31-23-11.....Rig up.

Ark. Fuel Oil Co.'s No. 9-B Kilgore, 330 ft. S, 1,650 ft. E, NW cor. NE NW, Sec. 31-23-11.....Location.

Ark. Fuel Oil Co.'s (formerly Muslow Oil Co.'s) No. 1 Mark Myer, 1,980 ft. N, 330 ft. W, SE cor., Sec. 36-23-12.....Arranging to deepen; T.D. 3,088 ft.

Ark. Fuel Oil Co.'s (formerly Muslow Oil Co.'s) No. 3 Peyton, Sec. 30-23-11.....T.A. 3,285 ft.

Ark. Fuel Oil Co.'s (formerly Muslow Oil Co.'s) No. 1 Floyd, 990 ft. S, 330 ft. W, C. Sec. 25-23-12.....W.O.S.R. 3,176 ft.

Ark. Fuel Oil Co.'s No. 1 Ramsey, 557 ft. S, 330 ft. E, C, Sec. 31-23-11.....Sand and sandy shale 3,151-66 ft.; cmtd. 6⅝-in. 3,141 ft.; T.D. 3,171 ft.

Askew & Goodman's No. 1 Roberson, 330 ft. S, 282 ft. W, NE cor. SW SW, Sec. 25-23-11.....Show oil and gas and S.W; T.D. 3,167 ft.; T.A. 3,280 ft.

(Continued on Page 114)

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

NORTH LOUISIANA
AVOYELLES PARISH

Company, farm and location— Remarks—

E. E. Tippett's No. 1 Chateline, NE NE, Sec. 34-1n-3e...Drlg. 1,600 ft.

BIENVILLE PARISH

W. A. Nichols et al's No. 1 McDermontt, 660 ft. S, 660 ft. W, NE cor. NE NE, Sec. 28-18-6.....Tested dry 2,050 ft.; S.D. 2,130 ft.

BOSSIER PARISH

Andrews & Davlin's No. 1 Nattin, 100 ft. N, 250 ft. W, C, Sec. 15-22-14.....Drlg. 760 ft.

Reid Clark et al's No. 1 Bollinger, SE cor. NW NW, Sec. 21-22-11.....Began drlg. May 5; cmtd. 10-in. 210 ft.

C. H. French's No. 1 Biedenharn, Sec. 23-21-14.....Cmtd. 6-in. 912 ft.; cored 2 ft. sand; show oil 2,004 ft.; S.D.

La. G. & F. Co.'s No. 1 Crystal Oil Ref. Co., 66 ft. N, 1,320 ft. W, SE cor. SW SE, Sec. 7-21-11.....Cmtd. 12½-in. 414 ft.

H. L. Morgan's No. 4 Wetherbee, 125 ft. W, 200 ft. S, NE cor. SW SE, Sec. 21-19-11.....D.S. test 1,920-30 ft., 5,000,000 ft. gas; arranging to deepen.

Walker et al's No. 1 Antrim, NW cor. SE, Sec. 28-22-13. S.D. 3,184 ft.

CADDO PARISH

Magnolia Pet. Co.'s No. 1 Swann, 330 ft. N, 380 ft. W, SE cor. NE SW, Sec. 16-21-14.....Tested dry 1,580 ft.; drlg. chalk 1,624 ft.

L. B. Mawk's No. 1 Swann, 440 ft. N, 200 ft. E, SW cor., Sec. 23-21-14.....S.D. for fuel; T.D. 700 ft.

R. W. Norton's No. 1 Hill, 630 ft. N, 1,260 ft. W, SE cor. NE, Sec. 33-23-16.....Drlg. lime 4,727 ft.

I. N. Phariss, trustee's No. 1 Oden, NE cor. SE NE, Sec. 16-19-14.....S.D. 2,322 ft; topped sand at 2,396 ft; set 6⅝-in; T.D. 2,409 ft.

C. W. Robinson's No. 1 Wilson, 990 ft. S, 330 ft. W, NE cor. SE, Sec. 2-15-16.....S.D.; W.O. 3,090 ft.

Triangle Drlg. Co.'s No. 1 Hardy et al, 660 ft. N, 660 ft. W, SE cor. fractional Sec. 18-19-16.....Drlg. 2,090 ft.

CATAHOULA PARISH

National O. & G. Co.'s No. 1 Kirkland, 585 ft. E, 495 ft. N, SW cor., Sec. 35-9-1n.....Rig up.

(Continued on Page 116)

Numerous Setbacks in Gulf Coast

Dry Holes, Dome Prospect Failures and Decreasing Production All Indicate Peak Development Has Been Reached

By Neil Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., May 12.—Developments in the Gulf Coast the past week were not encouraging for new production. Completions in the major producing fields failed to prove any extensions, which fact bears out beliefs of many operators that the height of development in these areas, namely, Refugio, Barbers Hill and Humble, has been reached. Additional abandonments of wildcats on recently discovered geophysical dome prospects, with these wildcats not revealing any showings or indications of domes, increased the doubt in the minds of many as to whether a large number of the reported new geophysical domes on the Coast really are salt domes.

Late in the week, Union Producing Co. had not made a well of its No. 2 M. F. Lambert, which was expected to have made the second producer in the 5,900-foot sand recently discovered in the Refugio Field. This test is 1,500 feet east of No. 1 M. F. Lambert, the discovery well of the sand, which is a wildcat producer approximately 2 miles to the northeast of other production. No. 2 M. F. Lambert, testing at a total depth of 5,891 feet, failed to flow. Tubing was run in the hole and after swabbing, the well made a small head. Later the swab line snapped and the test has a fishing job.

Four other tests are drilling in the vicinity of the Lambert well and the Houston Oil Co. has rigged up for a fifth, its No. 2 Rose Lambert, the latter offsetting Union's No. 3 M. F. Lambert, which is approximately 1,000 feet to the south of the discovery well of the 5,900-foot sand. Houston Oil Co.'s No. 1 Rose Lambert, west offset of the discovery well, is drilling at 2,900 feet. No. 3 M. F. Lambert is down 4,150 feet. Independent Oil & Gas Co.'s No. 1 M. F. Lambert, east offset to Union's No. 2 M. F. Lambert, is drilling at 5,000 feet, and Morgan Oil Corp.'s No. 1 St. Johns, diagonal south offset to No. 3 M. F. Lambert, is drilling at 4,100 feet.

Saxet Oil Co.'s No. 2 Ryals indicated an edge well of the narrow strip of 5,500-foot sand producers being completed in a northeast-southwest direction along the east and southeast side of the 3,700-foot town lot field. It came in flowing 1,000 bbls. net oil but was accompanied with about 3,000 bbls. of salt water, from a sand at a total depth of 5,467 feet. This well is 360 feet east of the same company's No. 1 Ryals, which made a good well as an east offset to Union Producing Co.'s Powers tract.

Indications of a good well, however, are seen in Independent Oil & Gas Co.'s No. 1 Mercy Academy, on the south side of the town lots and a west offset to Union's Mitchell tract. If a producer, this well will extend the 5,500-foot production a location to the west, and it will be the most southwesterly well of the group. It is in a sand at 5,366-74 feet with total depth of 5,390 feet. In a drill stem test it showed one fourble of oil in five minutes.

Refugio's Deep Sand

Another interesting test at Refugio is Mission Drilling Co.'s No. 1 Moss in the center of Town Block 110. This test has found the new 6,400-foot sand and in a test at 6,408-14 feet, it showed dry gas. In efforts of the drillers to come out of the hole the gas tried to blow out. This test, on the northeast part of the town lots, lies between the 3,700-foot town lot field and the 5,500-foot sand wells. It showed salt water in both of the two latter sands and was deepened to the 6,400-foot sand, which was opened for production last month by Union Producing Co.'s No. 1-A Rose Lambert. The latter well, however, failed to hold up and at present there is no production in this new deep sand. The Mission Drilling Co.'s Moss test is the deepest test drilled within the borders of the 5,500-foot sand wells and tends to prove the existence of this deep sand underlying the entire field. Other 6,400-foot tests have been on the outside of production limits.

Three late completions in the 3,700-foot sand at Refugio were reported, one oil well, one gasser and one abandonment. Houston Oil Co.'s No. 1 Vance, on the northeast edge, made a 600-bbl. well at 3,689-92 feet flowing through two chokes with a pressure of 150 pounds. This company's No. 9 Fannie Heard, a workover, which tested salt water at 3,703-18 feet, was plugged to 3,656-65 feet, where it made a 1,350-pound dry gasser. Sun Oil Co.'s No. 3 Buckley was junked and abandoned at a total depth of 3,693 feet.

Setback at Humble

Rio Bravo Oil Co.'s No. 1 fee gave another setback to the wildcat development which has been going on on the west side of the Humble Field. It tested salt water at a total depth of 4,212 feet and is to be deepened. This test is approximately 1,300 feet to the southeast of Sun Oil Co.'s No. 4 Bender, the west side discovery well and so far the only producer on this flank excepting several wells on the extreme northwest. This well is one of several to meet with failure in efforts of operators to link the production of the Sun well with that of the south side of the dome and that of the northwest.

On the northwest side of Humble, Dunbar & Deering got a 600-bbl. well in their No. 1 Hirsch in a sandy shale at 4,196 feet. Comparatively little new production has been added at Humble within the last several months and daily output of the field has declined steadily with the passing of development in the deep horizon on the south side.

Dome Prospects Abandoned

Wildcats on three recently reported geophysical salt dome prospects were abandoned the past week, two of them without a showing or an indication of a dome. These tests included Pure Oil Co.'s No. 1 Day, Section 1-10s-5w, Lacasine Bayou, Jefferson Davis Parish, Louisiana; the same company's No. 1 Jackson Brown, Burrett & Harris Survey, Pilant Lake, Fort Bend County, and Sloan Prospecting Co.'s No. 1 Mrs. J. Ulrich, Hannah Nash Survey, Cedar Bayou.

The latter test had favorable indications. It encountered several showings of oil and went into the Oligocene lime, characteristic of the Barbers Hill salt dome, 5 miles to the southeast. This test was drilled to a total depth of 6,221 feet, being abandoned in water sand. This company, however, has made a second location 2,113 feet to the northwest, this being No. 1 Davis.

Pure Oil Co.'s No. 1 Day, Lacasine Bayou prospect, was abandoned after going to 5,216 feet. This company's No. 1 Jackson-Brown, Pilant Lake, Fort Bend County, was quit at 4,510 feet. Neither showed anything. They follow the abandonement two weeks ago of Vacuum Oil Co.'s No. 1 Zenor at Patterson, St. Mary Parish, which also, being a geophysical test, failed to reveal any showings or indications of a dome.

Producers at Hull

Two producers were completed at Hull. The Texas Company's No. 1 Barrow fee was swabbed in flowing an estimated 1,100 bbls. of pipe line oil daily on a half-inch choke. The oil is from a sandy shale at 3,956 feet and is 34 gravity. This is one of the best wells at Hull in several months. Republic Production Co.'s No. 124 Dolbear, a workover, came in flowing 1,000 bbls. at 2,419 feet.

At Barbers Hill, Sinclair Oil & Gas Co.'s No. 6 Wilburn, southeast side of the dome, was completed flowing 1,000 bbls. of fluid, 20 per cent water, from sand at 5,249 feet. Sun Oil Co.'s No. 4 McKinney fee, flowed 55 bbls. daily at 5,304 feet. McAlbert Oil Co.'s No. 5 Woodward flowed 200 bbls. daily at 5,245 feet. The latter will be deepened.

Ada Belle Oil Co. got a 13-bbl. pumper at Batson in its No. 135 Carlton in a shallow sand, and Wilson-Broach completed No. 12 Parks, Vinton, on the pump for 12 bbls. at 2,605 feet.

With an increase of only 1,752 bbls., daily average production of the Gulf Coast might be considered as fairly steady. Fluctuations in the various fields were slight. Figures for the week ended May 10 by fields were:

SOUTHEAST TEXAS	
Allen	40
Barbers Hill	18,034
Batson	1,218
Big Creek	4,352
Blue Ridge	2,096
Brenham	140
Boling	1,020
Clay Creek	1,730
Damon Mound	665
DeWalt	11,858
Fannett	1,354
Goose Creek	4,592
Hankamer	1,783
High Island	1,598
Hull	10,068
Humble	16,861
Jasper County	20
Lost Lake	1,009
Markham	317
Nash	276
North Dayton	262
Orange	2,322
Orchard	1,896
Pierce Junction	2,418
Port Neches	1,734
Raccoon Bend	11,975
Refugio	36,773
Esperson (Sheeks)	3,677
Saratoga	1,054
Sour Lake	2,362
South Liberty	4,570
Spindletop	16,906
West Columbia	5,576
Total Southeast Texas	177,556
Week ending May 3	175,752
Increase	1,804

SOUTH LOUISIANA	
Anse La Butte	37
Bayou Blue	102
Bayou Bouillon	349
Black Bayou	45
Edgerly	522
Jennings	802
Hackberry	3,559
Lake Barre	909
Lake Pelto	198
Lockport	2,982
New Iberia	7
Fort Barre	1,984
Sorrento	109
Starks	176
Sulphur	6,100
Sweet Lake	109
Vinton	3,690
Welch	191
White Castle	370
Total South Louisiana	22,532
Total week ending May 3	22,584
Decrease	52
Total Gulf Coast	200,088
Week ending May 3	198,336
Increase	1,752

GULF COAST FIELDS AND WILDCATS

Week Ended May 10

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Production Co.'s No. 7 Barrow, southwest	Drlg. shale 4,631 ft.
Mills Bennett Production Co.'s No. 4 Wilburn, southeast	Fishing 5,205 ft.
Mills Bennett Production Co.'s No. 2 Gulf fee, southeast	T. D. 5,212 ft.; drlg. plug 5,123 ft.
Mills Bennett Production Co.'s No. 1 Gulf-Fisher, south	Drlg. rock 2,117 ft.
Mills Bennett Production Co.'s No. 2 Wilburn (workover)	Pulling screen to deepen 5,159 ft.
Fell & Thornton's No. 1 McLain	Rigging up to pump 2,140 ft.
Gulf Production Co.'s No. 3 Wilburn southeast	Drlg. gumbo and lime 4,830 ft.
Gulf Production Co.'s No. 4 Wilburn, southeast	Drlg. hard lime 4,827 ft.
Humhreys Corp.'s No. 1-F Barber, northwest	Drlg. hard sand 6,457 ft.
Humphrey's Corp.'s No. 2-C Kirby (workover)	Drlg. shale and lime 3,616 ft.
Humphreys Corp.'s No. 1 Morgan	Oil sand 6,371-81 ft.
Humphreys Corp.'s No. 2 Scott	Drlg. sand and shale 5,447 ft.
Humphreys Corp.'s No. 1 C. Barber (workover)	Drlg. sand and shale 5,447 ft.
Humphreys Corp.'s No. 2-H Kirby (workover)	Drlg. sand and shale 5,312 ft.
Humphreys Corp.'s No. 3-H Kirby (workover)	Drlg. sand showing oil 5,485 ft.
McAlbert Oil Co.'s No. 5 Woodward, southeast	Flowed 200 bbls. daily 5,245 ft.; to deepen.
Sinclair Oil & Gas Co.'s No. 3 McKinney fee	Tested salt water 5,344 ft.
Sinclair Oil & Gas Co.'s No. 4 McKinney Fee, southeast	Derrick.
Sinclair Oil & Gas Co.'s No. 6 Wilburn, southeast	Comp. flowing 1,000 bbls. fluid, 20 per cent water, 5,249 ft.
Sinclair Oil & Gas Co.'s No. 7 Wilburn, southeast	Drlg. gumbo and shale 4,458 ft.
Sun Oil Co.'s No. 4, McKinney fee	Comp. flowing 55 bbls. oil 5,304 ft.
Sun Oil Co.'s No. 5 Wilburn fee, southeast	To deepen 5,315 ft.
Sun Oil Co.'s No. 6 Wilburn fee, southeast	T. D. 5,248 ft.; cmtd. csg. 5,070 ft.
Sun Oil Co.'s No. 5 J. Wilburn, southeast	Drlg. sand, shale and lime 4,519 ft.
Sun Oil Co.'s No. 6 J. Wilburn, southeast	Drlg. shale and lime 5,159 ft.
Sun Oil Co.'s No. 5 Chambers, south	Location.
F. L. Thompson's No. 2 Wilburn, southeast	Set 120 ft. screen 5,190 ft.; swabbing.
F. L. Thompson's No. 3 Wilburn, southeast	Set screen 5,103 ft.; swabbing.
Yount Lee Oil Co.'s No. 14 Chambers, south	Drlg. sand 4,315 ft.
Yount Lee Oil Co.'s No. 3 Phillips, southeast	Cemented csg. 4,935 ft.
Yount Lee Oil Co.'s No. 7 Woodward, southeast	Drlg. water sand 4,621 ft.
Yount Lee Oil Co.'s No. 1 Zadie Fisher, southeast	Drlg. hard sand 6,739 ft.

RACCOON BEND—AUSTIN COUNTY

Humble & Valley's No. 5 Bellville	Derrick.
Humble & Valley's No. 1 Brown	Location.
Humble & Valley's No. 3 Buchanan	Derrick.
Humble & Valley's No. 2 Diemar	Drlg. hard sandy shale 3,311 ft.
Humble & Valley's No. 1-B Hardy (Waller County)	Running tubing 3,409 ft.
Humble & Valley's No. 5-B Grawunder	Standing 3,250 ft.
Humble & Valley's No. 2-B Hardy	Location.
Humble & Valley's No. 1-C Mitchell	Drlg. sand and shale 46 ft.
Humble & Valley's No. 7 Payne	Derrick.
Humble & Valley's No. 8 Payne	Derrick.
Humble & Valley's No. 9 Payne	Location.
Humble & Valley's No. 2 Sherrod	Location.
Humble & Valley's No. 4 Sherrill	Standing 3,575 ft.
Humble & Valley's No. 7 Thompson	Drlg. rock 581 ft.
Humble & Valley's No. 7 Urban	Shut down 1,165 ft.
Humble & Valley's No. 8-A Walton	Drlg. hard sand 964 ft.
Humble & Valley's No. 3 J. W. Wilson	Drlg. sandy shale and lime 3,260 ft.

(Continued on Page 120)

Hobbs Pool Has 36 Active Operations

Kane County, Utah, Test Has Show of Oil With Sulphur Water. Tensleep Test on Mahoney Dome Showing Increase

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain area

DENVER, Colo., May 13.—New locations in the Hobbs Pool in Lea County, New Mexico, this week bring the total active operations up to 36. The Humble Pipe Line Co. is expected to begin making connections within two weeks. Most of the wells are in the earlier stage of drilling, but the Shell Petroleum Corp.'s No. 1 State is nearing completion. After making 279 bbls. in 18 hours, it found two increases in production upon going deeper, but is still some distance off the big pay. The Texas Pacific Coal & Oil Co.'s No. 3 State in the Cooper area, ran into sulphur water upon being deepened and is plugging back. Before deepening it had made as high as 1,687 bbls. of oil in 24 hours. Cranfill & Reynolds' No. 1-C State in this area is showing more water. The Tidal Oil Co. has made a location in the Eunice area half a mile from the Continental's producer, the first well since the discovery was drilled in.

The Utah Oil Refining Co.'s Kane County test in Utah had a show of oil with sulphur water in the top of the Kaibab lime.

The Continental Oil Co.'s Pipe Springs test in southeastern Colorado ran into salt water at 6,015 feet and does not look promising. A new operation is being started in Garfield County by the Fulton Petroleum Co. to provide natural gas for Grand Valley towns.

The Tensleep test of the Producers & Refiners Corp. on the Mahoney Dome in Carbon County, Wyoming, is showing an increase in production after plugging back and being shot and a new producing horizon has been found in Little Lost Soldier in Sweetwater County by the Prairie Oil & Gas Co. in its test to the Tensleep. One completion was reported, a 100-bbl. shale well in Salt Creek.

NEW MEXICO

Hobbs Area—Lea County

New locations in the Hobbs area announced this week brings the total number of active operations up to 36 with about 4 more offsets remaining to be spotted. Since most of these wells are spudding at about the same time, several lively weeks are in prospect when they begin to reach the pay. The movement of oil out of the field probably will begin within the next two or three weeks as the Humble Pipe Line Co.'s line from the south out of Winkler County has been completed to about 20 miles north of Jal and within 6 miles of Hobbs. Work has not yet started on any of the other projected lines, though pipe for the Atlantic Pipe Line Co.'s line is being moved from the mills. Unless all signs fail there is going to be a lot of oil for the market out of this pool before the summer is very far advanced.

The town of Hobbs now has a railroad, and soon will have better highway connections. Gov. R. C. Dillon and W. C. Davidson, state highway engineer, announced at Roswell this week that the state will start construction at once on a 21-mile cutoff from Lovington direct to Hobbs, shortening the present route by 13 miles. A state all-weather highway now runs eastward from Roswell through Tatum. An unimproved stretch goes south from Tatum to Lovington, where it joins another all-weather state road running due south to a point near Monument where it turns to the southwest and goes to Carlsbad. The new stretch will be directly from Lovington to Hobbs.

The spotting of wells in the Hobbs area so far puts practically all of them 330 feet back from the lease line. An exception to this rule has been made in Sections 4 and 5-19-38. The Sun Oil Co. had a location for its No. 1 McKinley, 330 feet each way out of the NE cor., Section 5-19-38, and this week made a location for its No. 2 McKinley, 990 feet from the north line and 330 feet from the east line, or one location to the south of its No. 1. The Midwest Refining Co. owns the offset acreage on the east and has spotted its No. 8 State in the C NW NW, Section 4-19-38, 660 feet back from the lines. It is reported that the Sun company has agreed to change its locations and instead of drilling two offsets, will put its No. 1 McKinley in the center of the 40, thus setting a precedent for wider spacing of wells in that immediate area. The Humble Oil & Refining Co.'s No. 1 Bowers, NE SE, Section 30-18-38, the big well which started the present drilling campaign, was located in the center of the 40, but owing to the practice which has been followed, it is moving in a little closer and has made a location for its No. 5 Bowers, 990 feet from the east line and 2,310 feet from the south line, Section 30-18-38. This puts it in the NW NE SE of the section and in the same 40 as No. 1 Bowers. It is an offset on the south to one of the new Getty locations. In addition to the Humble's No. 5 Bowers, other new locations include the following: George F. Getty, Inc.'s No. 2 McKinley, SW SE NE, Section 30-18-38; the same firm's No. 3 McKinley, NW SE NE, Section 30; W. C. McBride, Inc.'s No. 1 McKinley, SE SE NE, Section 30-18-38; the Amerada Petroleum Corp.'s No. 1-A State, SW NW NE, Section 32-18-38, and the Shell Petroleum Corp.'s No. 2 State, NW SW NE, Section 32-18-38. All of these are 330 feet back from the lease line or 660 feet from the nearest offset. Other operations include the following:

The Midwest Refining Co.'s No. 33 Byers, SE SW NE, Section 4-19-38, is bottomed at 460 feet in red beds and hard sand and is waiting for cement to harden. The 16-inch was set at 152 feet. The Walker Oil Corp.'s No. 2 Terry, SW SW SE, Section 10-19-38, is drilling at 1,000 feet. The Midwest's No. 36 State, SE SE SW, Section 10-19-38, is drilling at 1,565 feet in hard red shale and anhydrite, and its No. 1 State, NE cor. NW, Section 15-19-38, is rigging up. The same company's No. 13 State, SE NE NW, Section 15-19-38, is drilling at 599 feet in the red beds and hard sand, and the Prairie Oil & Gas Co.'s No. 1 Selman, NW SW NE, Section 15-19-38, is drilling in the red beds at 1,300 feet. The 12½-inch was cemented at 197 feet. The Prairie's No. 1 Crump, NW cor. NE, Section 15-19-38, is drilling at 1,223 feet in hard sand with the 12½-inch cemented at 160 feet, and its No. 2 Crump, SW NW NE, Section 15-19-38, is drilling at 1,401 feet in the red beds. The Shell Petroleum Corp.'s No. 1 McKinley, SW cor., Section 19-18-38, is drilling at 2,820 feet in anhydrite. The 9-inch was cemented at 2,790 feet. The Ohio Oil Co.'s No. 1 State, NE NE SW, Section 30-18-38, cemented the 20-inch at 215 feet, and George F. Getty, Inc.'s No. 1 McKinley, SW cor. NE, Section 30-18-38, is rigging up. The Amerada Petroleum Corp.'s No. 2 McKinley, SE cor. NW, Section 30-18-38, is drilling at 380 feet in red rock, and its No. 1 McKinley, NW cor., Section 30-18-38, is drilling at 500 feet. The Humble Oil & Refining Co.'s No. 2-A Bowers, NW cor. SE, Section 30-18-38, is rigging up after skidding rig, and its No. 4 Bowers, SE cor., Section 30-18-38, has rig completed. The Humble's No. 3 Bowers, SW cor., Section 29-18-38, is bottomed at 218 feet in hard sand with the 12½-inch cemented at that depth. The Tidal Oil Co.'s No. 1 Grimes, SW NE SE, Section 29-18-38, is moving in, and the California Co.'s No. 1 Grimes, NW SE SE, Section 29-18-38, is rigging up. The Empire Gas & Fuel Co.'s No. 1 Fowler, NE cor., Section 31-18-38, is drilling at 223 feet in the red beds. The Gypsy Oil Co.'s No. 1 Grimes, NW cor., Section 32-18-38, is drilling below 100 feet, and the Shell Petroleum Corp.'s No. 1 State, SE SW NE, Section 32-18-38, is drilling at 3,310 feet. It had a sand at 3,136-44 feet which tested 279 bbls. in 18 hours. There was an increase in the oil and gas at 3,178-86 feet. It is drilling ahead at 3,310 feet. The Ohio Oil Co.'s No. 1 State-Northrup, NE NW SE, Section 32-18-38, is mudding off gas at 2,833 feet. The Texas Production Co.'s No. 1-C State, NE cor., Section 25-18-37, is drilling at 300 feet, and the Texas Pacific Coal & Oil Co.'s No. 1-G State, SE cor., Section 24-18-37, is drilling at 1,950 feet. Fisher & Lowrie's No. 1 State, NE cor. NW, Section 11-18-36, west of the Hobbs area, is drilling at 4,830 feet.

Cooper Area—Lea County

The Texas Pacific Coal & Oil Co.'s No. 3 State, NW SW NW, Section 21-23-36, which was completed at 3,717 feet two months ago with an initial production of 1,687 bbls., was deepened to 3,808½ feet at which depth it was making 1,000 bbls. of sulphur water per day. The water was encountered at 3,806-08½ feet. It is being plugged back in an effort to shut off the water. This was the best well so far drilled in that area. The same company's No. 4 State, NW NE NW, Section 21-23-36, a third of a mile to the northeast of No. 3 State, is drilling at 3,547 feet in gray lime. It had a show of gas at 3,365-70 feet. Cranfill & Reynolds' No. 1-C State, SW SE SW, Section 16-23-36, an offset on the north to the Texas Pacific's No. 4 State, is drilling at 3,885 feet in gray sandy lime. There were increases in the quantity of water at 3,845-51 and 3,856-60 feet and the well is now making around 30 bbls. of oil and the same quantity of water per day.

Eunice Area—Lea County

The Tidal Oil Co. has made a location for its No. 1 O. L. Colman in the SW cor. NE, Section 17-21-36, half a mile to the northeast of the Continental Oil Co.'s No. 1 A. E. Meyers, which gauged 1,300 bbls. the first 24 hours, when completed last January. The Tidal company's well is the first to be started in the vicinity of the producer. The Ohio Oil Co.'s No. 1 State-McDonald, NW SW, Section 15-22-36, cemented the 16-inch at 645 feet and is waiting. The Empire Gas & Fuel Co.'s No. 1 Closson, NW SE, Section 6-22-36, is still fishing at a total depth of 4,127 feet.

Lea Area—Lea County

Cranfill & Reynolds' No. 2-B State, NW cor., Lot 9, Section 21-21-33, which was deepened last week from 3,765 feet to 3,779 feet, has been put on the pump and is making 800 bbls. per day.

Maljamar Area—Eddy County

The Pueblo Oil Co.'s No. 5 Russell, SW cor. NW, Section 18-17-31, is drilling at 2,990 feet. It had approximately

(Continued on Page 106)

CALMONT WELL IN TURNER VALLEY IS PROBABLY BIGGEST PRODUCER

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, May 10.—Probably the biggest well yet drilled in the Turner Valley, Calmont Oils' No. 2, LSD 11, Section 20-19-2w5, blew into production 156 feet in the lime at a depth of 4,977 feet. The tools were clear of the hole when the well blew in under tremendous pressure with a flow estimated to be larger than that of Home Oil Co.'s No. 3, which held the South Turner Valley record. The well blew wild for days, throwing fragments of limestone out of the hole, and early attempts to partially control it and test production were unsuccessful. It was speedily found that two separators could not handle the production and two additional separators were installed, the four flares burning to a height of 60 feet. Attempts to test with four separators, however, proved unsuccessful, and two more were installed. As the well cleared itself, production steadily increased, and at last reports the wet gas flow was estimated more than 30,000,000 feet a day, with a potential crude naphtha recovery rated anywhere from 500 to 1,100 bbls. a day.

Storage tanks are being run up to handle production. Imperial Oil, Ltd., will take the entire output. Officials of Calmont Oils, Ltd., claim only that No. 2 will be as good as any of the Home Oil Co. producers.

Completion of Calmont's No. 2 as probably the biggest producer in the field comes as the startling anticlimax to a run of hard luck unprecedented in the history of the field. Calmont Oils, Ltd., was incorporated under Dominion charter several years ago and started its No. 1 test in LSD 2, Section 1-20-3w5, in the Central Turner Valley. No. 1 got the lime at what was then a record depth and after getting a strong gas show ran into drilling difficulties at around 5,650 feet. After wrestling for more than a year with one of the most difficult fishing jobs in the history of the field, the well was cemented back some distance above the lime and the tools and casing sidetracked. Actual drilling was resumed only a few weeks ago.

Previous Tests

In the meantime, the Dallas Oil Co. acquired LSD 11, Section 20-19-2w5, in the South Turner Valley, and abandoned a test there without reaching the lime. Later the Home Oil Co. drilled its big producer in Section 20, and Calmont Oils, Ltd., took over the Dallas company and its acreage, and started No. 2 on the Dallas lease. Subsequently seven other tests were started on this acreage. Of these three, Nos. 2, 4 and 6, developed serious casing troubles, and a lot of hard work was required to overcome these and carry No. 2 to the lime.

Acquiring the Dallas tract was part of a program of expansion launched by the Calmont company last year. At the time work was also undertaken in the North Turner Valley, where the Seneca Oil Co. test was taken over. The Calmont company is capitalized at $10,000,000 with approximately $1,800,000 issued. Officers are: President, Lord Askwith; vice

(Continued on Page 105)

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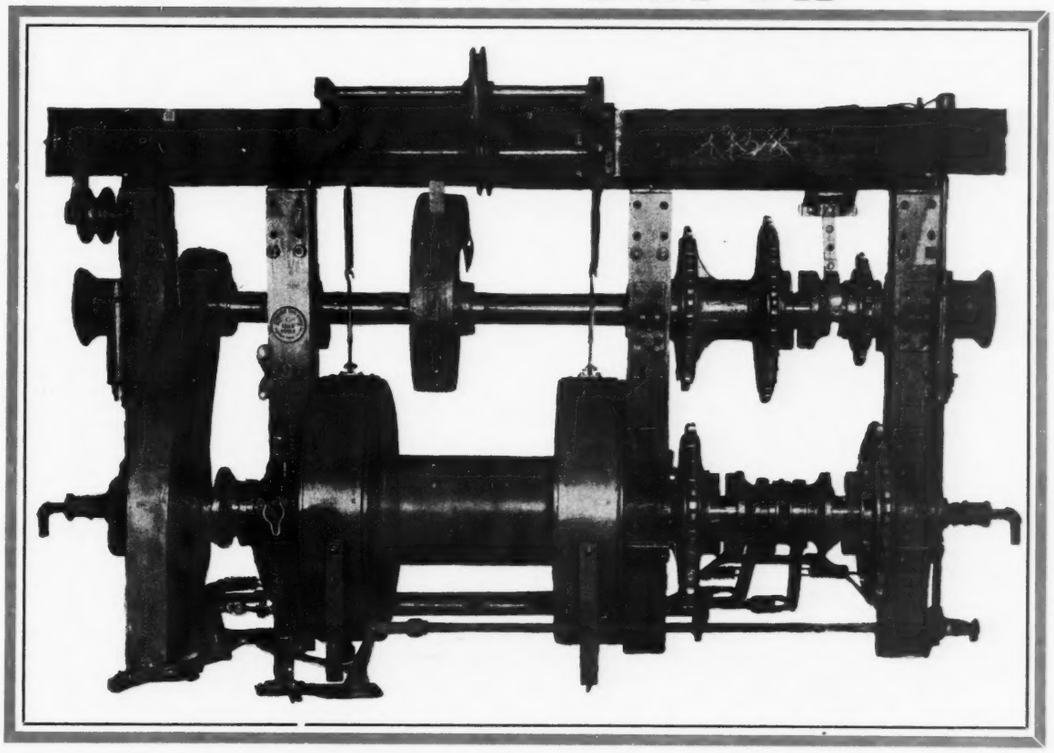

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California Entering Critical Period

Success of Curtailment Program Likely to Depend on Degree to Which Its Provisions Are Enforced During the Next 30 Days

By L. P. Stockman
Staff Correspondent, Gulf Coast Fields

LOS ANGELES, Calif., May 10.—The next 30 days should be an important period in California as developments in this time should reveal the trend of events for the remainder of the current year. It is not necessary to say that curtailment work must be rigidly enforced if operators expect to maintain the present artificial equilibrium as any relaxation in enforcement work would precipitate another period of overproduction and possibly result in drastic price reductions.

State production, which averaged 635,483 bbls. daily during March and approximately 620,000 bbls. per day during April, has been in excess of the allowable fixed by the general curtailment committee at 610,000 bbls. per day and will probably continue above the allowable maximum unless more effective means are employed to bring offenders into line. The failure to reach the desired objective can be attributed to the completion of new wells which, in accordance with precedent, are permitted to produce unrestrained for five days in order to establish their rated potential.

If the curtailment committee could peg the allowable production of each field and force operators to keep their aggregate production within the allotted production irrespective of new completions, the State's output could be brought down within striking distance of the 610,000 bbls. per day established as the maximum. It has been customary, however, to increase the potential of each field by adding the output of each new well completed. This has become an important factor in flush fields, especially at Elwood.

May Jeopardize Whole Program

If the potential production of flush fields is increased with each succeeding completion this practice may eventually jeopardize the entire curtailment program. Sixty days ago the Elwood Field of Santa Barbara County had a rated potential daily production of 64,579 bbls. and an actual daily production of around 40,000 bbls. This field at the present time has a rated potential of about 85,000 bbls. per day and a current daily production of 49,000 bbls. This upward revision is attributed to several completions, two of which, the Pacific Western's well No. 4 on Tideland permit No. 92 and Barnsdall's well No. 2 on Tideland permit No. 88, showed daily potentials of 10,183 bbls. and 10,000 bbls., respectively.

A similar situation exists in other fields, although to a much smaller degree. This condition has complicated enforcement work and prevented the general operators committee from bringing state production down to the established maximum.

Operators are at present entertaining a proposal to reduce the allowable production of the State from 610,000 bbls. per day to 550,000 bbls. daily in order to permit the liquidation of present excessive stocks of crude and refined oils. The final outcome of this movement remains to be seen, however, as there is no unanimity of opinion as to what constitutes the limitation necessary to effect stabilization.

Regardless of the varying diversified interests of producers and refiners a check indicates that state production of crude oil must be reduced below 600,000 bbls. per day if refiners are to be permitted to liquidate 50 per cent of their present stocks of gasoline and naphtha distillates. During March, gasoline stocks were reduced 382,222 bbls. and a further substantial reduction is anticipated during the next several months due to the advent of the summer season with its usual increased consumption.

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	77,405	328,410
Fuel oil	.....	.....	.....	.....	71,950	49,950
Diesel and gas oil	64,725	9,246	94,546	13,507	1,536,369	800,124
Gasoline	482,800	68,971	302,575	43,225	5,941,623	6,743,433
Naphtha distillate	.....	.....	.....	.....	.....	81,750
Coastwise—						
Crude oil	412,019	58,860	188,102	26,872	5,450,053	8,979,066
Fuel oil	303,037	43,291	380,082	54,297	6,086,148	7,566,182
Diesel and gas oil	15,174	2,168	8,484	1,212	652,364	493,537
Gasoline	247,673	35,382	255,219	36,460	3,827,400	3,735,198
Kerosene	.....	.....	19,281	2,754	52,509	14,195
Exports—						
Crude oil	34,025	4,861	84,021	12,003	2,206,579	1,740,528
Fuel oil	447,115	63,874	497,955	71,136	6,312,710	6,373,143
Diesel and gas oil	62,545	8,921	79,072	11,296	1,793,543	757,937
Gasoline	40,202	5,743	249,124	35,589	5,266,570	3,084,001
Kerosene	121,132	17,305	95,379	13,626	1,522,476	885,534
Lubricants	.....	.....	.....	.....	10,082	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC AND GULF COAST PORTS

Diesel and gas oil	.....	.....	.....	.....	88,280	.....
Gasoline	.....	.....	.....	.....	440,188	935,547
Lubricants	.....	.....	.....	.....	2,946	.....
Coastwise—						
Fuel oil	200,433	28,633	.....	.....	1,398,693	848,534
Diesel and gas oil	20,135	2,876	.....	.....	124,462	234,220
Gasoline	110,829	15,833	32,461	4,637	1,417,136	1,384,903
Kerosene	.....	.....	.....	.....	106,349	39,647
Exports—						
Crude oil	.....	.....	.....	.....	3,075	121,603
Fuel oil	94,115	13,445	.....	.....	441,559	241,671
Diesel and gas oil	.....	.....	.....	.....	124,540	124,838
Gasoline	87,000	12,429	87,640	12,520	1,375,492	2,007,736
Kerosene	79,000	11,286	.....	.....	241,499	199,428
Lubricants	.....	.....	.....	.....	.....	17,688

Reduction in Stocks Misleading

This reduction in gasoline stocks during March, however, is somewhat misleading unless due consideration is given to the storage condition of naphtha distillates as this commodity, a potential source of gasoline, increased 508,725 bbls. Light refinable crude also increased, the accumulation during March approximating 468,967 bbls.

If light crude and naphtha distillates were refined the result would have been an increase in gasoline stocks rather than a decrease in view of the fact that naphtha distillates contain more than 50 per cent of gasoline and light refinable crude about 30 per cent. In other words, if the accumulation of naphtha distillates and light refinable crude in March had been carried through to the final analysis, gasoline stocks would have shown an increase instead of a decrease.

July, August and September, the peak months of consumption, should result in a substantial draft on gasoline stocks, provided curtailment work is continued, but it is not likely that the normal consumption between now and the end of September will make much of a dent in the present stocks of gasoline, which totaled 18,373,397 bbls. on April 1, 1930, unless state production is reduced below 600,000 bbls. per day.

Attention was called to the fact several weeks ago that the California curtailment program would soon be confronted with a crisis due to the expiration of signed agreements on May 1. That this situation has developed is evidenced by the fact that A. T. Jergins, chairman of the Long Beach committee, and Neal Anderson, the umpire for that district, delivered an ultimatum to operators early this week that they must change their attitude and sign a 90-day extension under penalty of jeopardizing the curtailment program. The ultimatum stated that: "Unless a sufficient amount of production is signed up for three months on the curtailment agreement the field will abandon the conservation program."

Entire Field Not in Line

Long Beach operators met yesterday in response to this call, and, while it was the consensus of the meeting to extend curtailment work for another 90 days, the entire field is not yet in line by any means. Paul Grimm is also experiencing difficulty in getting the signatures of Santa Fe Springs operators, and, while the present curtailment will probably be prolonged, this is not yet assured. Paul N. Boggs, general chairman of the statewide committee on curtailment, recently wired the chairman of every field that "the seriousness of existing continued excess production calls for immediate action which must be taken to hold the fields down to their allowables. Seriousness of the situation justifies immediate earnest effort of each committee."

Both Santa Fe Springs and Long Beach have been over the maximum production which each is allowed in conformity with the curtailment agreement and it is imperative that these fields be brought into line if curtailment work is to continue. The major companies are making strenuous efforts to keep production down but many of them are getting disgusted with the situation because of the failure of independent operators to co-operate with them.

Santa Fe Springs

The Union Oil Co. has not been playing any favorites as far as any of the various oil zones at Santa Fe Springs are concerned, as this week the company finished No. 57 Bell in the Meyer zone, No. 20 Farwell in the O'Connell zone and No. 55 Bell in the Clarke. Last week the Union finished No. 24 Alexander doing 2,289 bbls. per day from the Nordstrum zone at 5,125 feet and a short time previously recompleted No. 14 Alexander doing 380 bbls. daily from the Buckbee zone at 5,275 feet. Nos. 55 and 57 on the Bell lease, completed this week, were good for 795 bbls. and 260 bbls., respectively, the former being finished at 7,939 feet and the latter at 4,847 feet. No. 20 Farwell was good for 690 bbls. per day from 6,822 feet, the oil being clean and testing 30.4° gravity. The Union has several other potential producers nearing completion in this field, four of which, Nos. 20 and 21 on the Alexander lease and Nos. 15 and 18 on the Farwell property, should be tanking oil within the next week or 10 days.

Production of oil and gas showed a substantial increase at Santa Fe Springs during the past seven-day period, the high point for the week being 135,051 bbls. of crude oil and 374,194,000 feet of natural gas per day. The highest daily output during the previous week was 133,576 bbls. of crude oil and 363,609,000 feet of natural gas. The allowable for the field is 104,000 bbls. of oil and 335,478,000 feet of natural gas daily. The Associated recompleted No. 7 Dewenter during the early part of the week and this former upper zone producer was returned to production doing 451 bbls. of 32.3 gravity oil daily from the Clarke zone at 7,900 feet, the hole having been finished with a 5-inch liner carrying 450 feet of perforated.

H. A. Bardeen also recompleted a former upper zone producer this week when his No. 1 Springs was returned to production doing 160 bbls. daily from 7,203 feet, the output showing a cut of approximately 25 per cent. The Texas Company failed to secure a satisfactory water shut-off in its deep test, No. 10-A Patterson, at 9,058 feet and will require further work before it affords a satisfactory test.

Potrero

The past week saw the completion of another large well in the town lot section of the Potrero Field of Los Angeles Basin, making a total of four substantial completions to be finished in the deep Sunset zone during the past month. The Sunset Pacific Oil Co. focused the attention of operators on this field a few weeks ago when it brought in No. 3 Inglewood Community flowing 1,810 bbls. per day from 5,370 feet, and followed this up a short time later by completing No. 2 Inglewood Community for an initial of 875 bbls. daily from 5,499 feet. Last week Hugh Grant completed his No. 1 Potrero doing 806 bbls. per day from 5,250 feet. Taylor & Murphy stepped into the picture a few days ago by finishing No. 1 Potrero flowing 1,645 bbls. of clean 37.6 gravity oil per day from 5,336 feet, the hole having been completed with a 6⅝-inch liner carrying 400 feet of perforated.

Completion of these substantial producers has greatly stimulated interest in the Potrero Field, especially in view of the fact that this district has proven a dismal failure as far as the upper zones are concerned. The Sunset Pacific, which took over Max Pray's No. 1 Gascho and the Globe Lease & Royalty Co.'s No. 1 Potrero, former upper zone producers, a week or so ago, has staked location for an additional well and will start rig construction within the next few days.

The Sunset's No. 3 Inglewood Community, by the way, is still holding up in good shape, the output gauging 1,290 bbls. yesterday. Graham & Loftus, Rawco Oil Co. and the Richfield Oil Co. have also staked new locations within the past few days. Hugh Grant and Ed. McAdams have already started erecting new rigs and should begin making hole within the next 10 days. The Associated, Thomas F. Barton, George F. Getty, Sunset Pacific and York & Lockhart are all deepening former upper zone producers. As a result of this revival of drilling, the Edington Witz Refining Co. and the Van Foster Co. have completed tentative plans to erect absorption plants.

Huntington Beach

The Barnsdall Oil Co. failed to get a water shut-off in No. 1 Borchard, a deep test in the eastern part of the Huntington Beach Field, and will be obliged to recement before the potentiality of this new zone can be determined. This well, bottomed at 5,596 feet, with a string of 8⅝-inch landed at 5,530 feet, failed to show any kick after being cleaned out to bottom during the water test. The Superior has not yet finished redrilling No.

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1 Babbitt, another deep test at Huntington, but with only 300 feet to go before reaching bottom at 4,369 feet the company should be in a position to begin making new hole soon.

The Richfield Oil Co. completed No. 2 Dieter Golay, a new well in this field, but it was only good for 89 bbls. of 21.2 gravity oil per day from 3,645 feet, the hole having been finished with a string of 8⅝-inch landed at 3,598 feet. The Vaqueros Major Oil Co. has filed an application with the United States War Department for permission to construct a drilling pier out into the ocean at Huntington Beach in order to drill a test well on State tideland permit No. 194, comprising 100 acres, about 1 mile west of the town lot section. Some opposition has already developed and some difficulty may be experienced in prosecuting work if the superior court grants a petition for an injunction to prevent the Vaqueros Major Oil Co. from hauling material and equipment over the properties of the Bolsa Land Co.

The Standard Oil Co. is stepping right along with an aggressive drilling campaign in the West Coyote Field of Los Angeles basin in spite of the fact that the company is obligated by the curtailment agreement not to increase its current production. The new work under way in this field is principally for the purpose of increasing its potential production in the deep zones so that the company would be in a position to boost its daily output at a moment's notice in case it was found advisable to do so. In addition to the four drilling wells under way, rig construction has been started for another, No. 105 Murphy. The projects drilling ahead at present are No. 46 Emery at 3,070 feet, No. 47 Emery at 2,005 feet, No. 103 Murphy at 3,062 feet and No. 104 Murphy at 3,145 feet.

In the Rosecrans Field, the Barnsdall Oil Co. has killed No. 6 O'Dea preparatory to carrying it down to the deep Zinns zone, in which the company has finished several substantial producers during the past few months. Deepening operations will be resumed at 4,663 feet. It has been several months since a new well has been finished at Seal Beach due to curtailment of drilling and production activities, but a check indicates that the Continental Oil Co. will probably complete three or four new producers within the next 30 days. Four wells are being drilled on the Bixby and Selover leases, three of which, No. 26 Bixby and Nos. 22 and 23 on the Selover property, are already in the oil sand. In the Richfield district the Continental finished No. 2 Stern, a new well, pumping 135 bbls. of 22.1 gravity oil per day from 4,446 feet, the hole having been completed with a 6⅝-inch liner carrying 665 feet of perforated.

Playa Del Rey

The Ohio's No. 2 Recreation in the Playa Del Rey Field, which the company finished early this week doing 1,450 bbls. per day from 6,154 feet, is still holding up in good shape, the current output being 1,360 bbls. daily. This is the second well to be finished in this field since its discovery by the Ohio Oil Co. several months ago. It is quite possible, however, that another producer may be brought in before the close of another week as the Union Oil Co. has cored some excellent looking oil sand in No. 1 Del Rey at 3,584 feet. This zone has not yet been found productive in any of the other projects under way at Playa Del Rey and for this reason the Union's projected test will be watched with considerable interest, especially in view of the fact that it will change the entire outlook of the field if commercial production is secured in the shallow zone. The importance which attaches to this discovery lies in the fact that it is logical to expect additional zones if the top sand is found productive.

Several new wells were started during the past week at Playa Del Rey and a number of others are scheduled to get under way soon. A. T. Jergins has spudded in his No. 1 Robertson, located down near the beach within throwing distance of the ocean, and good frontage is being made. One of the most interesting wells in the eastern end of the field is the Ohio's No. 1 Howland, which is rotating ahead at 6,670 feet, and, while oil and gas showings are being logged, this well failed to find the shallow zone which should have been picked up around 3,800 feet. The discovery well was completed at 6,199 feet, over 400 feet higher than the present depth of No. 1 Howland.

There were only two wells completed at Long Beach during the past week but a number of others have been passed for production and should be tested out soon. The new wells finished were George F. Getty's No. 28, which came in flowing 530 bbls. per day from 6,726 feet, and the Pan California Oil Corp.'s No. 8 Signal, which showed an initial of 418 bbls. from 6,707 feet. Field activity at Long Beach is swinging back along American Avenue, northwest of the big hill and in the vicinity of the intensely developed Los Cerritos district, due to water troubles being experienced in the eastern sec-

(Continued on Page 105)

MUSKEGON FIELD REGAINS LEAD IN PRODUCTION IN MICHIGAN

By Special Correspondent

MUSKEGON, Mich., May 12.—With three newly completed oil wells and one new gas well in the Dundee, the upper and lower Traverse pay sands, respectively, the Muskegon Field for the first time since January 1 took the lead during the week.

The largest of the new producers in the Muskegon Field is the Eureka Gas & Oil Co.'s No. 1 Fred A. Eadus, SW SE NE, Section 12-10-17, Laketon Township. Upper Traverse limestone was struck at 1,660 feet while pay sands were encountered at 1,670-75 feet, the bottom of the hole. The well makes about 300,000 feet of gas and has been tubed so that it will flow itself at least for a time. On the first test it made 400 bbls. in 48 hours. On a second test it made 84 bbls. in six hours. It has not been thoroughly tested since tubing was run.

Witt & Wyant, Inc. finished deepening No. 5 Alfred H. Fenner, an upper Traverse well, when it came in as a 200-bbl. initial producer in the Dundee flowing itself. It is in SW SW, Section 11-10-17, Laketon Township. Dundee limestone was topped at 2,040 feet. Pay sands were encountered at 2,052-58 feet and the well after nearly a week of production is reported making 190 bbls.

The Blue Arrow Petroleum Co.'s No. 2 Workman was drilled to 2,045 feet and is rated as 15 bbls. initial.

The Lake Shore and Citizens Petroleum companies' No. 1 Reeths or Smith, NE SE, Section 8-10-16, was brought in with an initial flow of about 1,000,000 feet of gas in the lower Traverse at about 1,875 feet.

Completion of these four producers and announcement of a new deep test

(Continued on Page 128)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Simmel, L. G., No. 1 Inglewood, Los Angeles Co.	21- 2-14	5,380	suspended
Raleigh Oil Co., No. 1 Malibu, Los Angeles Co.	1- 2-19	3,880	suspended
Union, No. 1 Orchard Dale, Los Angeles Co.	10- 3-11	mtl.	building rig
Clearwater Oil Co., No. 1 Bellflower, Los Angeles Co.	21- 3-12	5,150	cleaning out
Burlingham Pet., No. 1 Compton, Los Angeles Co.	17- 3-13	3,090	sd. sh. drilling
Diller, W., No. 1 Watts, Los Angeles Co.	8- 3-17	5,850	gr. sd. drilling
Crimson Pet., No. 1 Compton, Los Angeles Co.	22- 3-13	130	sd. drilling
Ohio, No. 1 Moneta, Los Angeles Co.	35- 3-14	4,377	sd. sh. drilling
Cal. Ventura Oil Co., No. 1 Manhattan, Los Angeles Co.	30- 3-14	6,525	suspended
Cal. Ventura Oil Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	rig	suspended
Archer Oil Co., No. 1 Watson, Los Angeles Co.	17- 4-13	5,557	suspended
Shell, No. 1 Van Nuys, Los Angeles Co.	19- 2-15	2,390	sd. sh. drilling
Anchor Oil Co., No. 1 Puente, Los Angeles Co.	19- 2-10	4,820	suspended
Rucker, R. C., No. 1 Puente, Los Angeles Co.	27- 2-10	3,660	suspended
Sherman, J. W., No. 1 Puente, Los Angeles Co.	35- 2- 8	850	suspended
Keck & Hall, No. 1 Puente, Los Angeles Co.	32- 2- 8	1,120	gas well
Marcel Pet. Co., No. 1 Puente, Los Angeles Co.	31- 2- 8	1,820	hd. sd. drilling
Los Gatos Oil Co., No. 1 El Monte, Los Angeles Co.	16- 1-11	1,950	suspended
Olympic Corp., No. 1 Calabasas, Los Angeles Co.	18- 1-17	4,100	sd. sh. drilling
Martin, J. W., No. 1 Newhall, Los Angeles Co.	22- 1-17	1,290	suspended
Consolidated Oil Co., No. 1 Newhall, Los Angeles Co.	8- 3-16	1,590	sd. sh. drilling
National Sec., No. 1 Newhall, Los Angeles Co.	1- 3-16	874	suspended
Anderson, P. B., No. 1 Hasley Canyon, Los Angeles Co.	1- 3-16	945	sd. sh. drilling
Pioneer Pet., No. 1 Newhall, Los Angeles Co.	14- 3-16	2,838	suspended
Union, No. 1 Coyote, Sansinena, Los Angeles Co.	30- 2-10	3,300	br. sh. drilling
Tureco Oil Co., No. 1 Whittier, Los Angeles Co.	29- 2-11	1,206	sd. sh. drilling
Beard, G. F., No. 1 Brea Canyon, Los Angeles Co.	30- 2- 9	1,099	suspended
Western Gulf, No. 1 Brea Canyon, Los Angeles Co.	28- 2- 9	4,207	br. sh. drilling
Vaqueros Major, No. 1 Huntington Tideland, Orange Co.	32- 5-11	....	drive piles
Standard, No. 1 Bastanchury, Coyote, Orange Co.	21- 3-10	5,395	sd. sh. drilling
Graham & Loftus, No. 1 Coyote, Orange Co.	18- 3- 9	3,260	hd. sd. drilling
Union Oil Co., No. 1 Richfield, Orange Co.	13- 3- 9	4,410	hd. sd. drilling
Simmel, L. G., No. 1 Yorba Linda, Orange Co.	21- 3- 9	463	sd. drilling
Mesa Pet., No. 1 Newport, Orange Co.	21- 6-10	4,910	suspended
Hall, H. L., No. 1 Newport, Orange Co.	20- 6-10	700	set pipe
Standard, No. 1 Newport, Orange Co.	26- 6-10	....	location
Fidelity Pet. Co., No. 1-A Murrietta, Riverside Co.	23- 7- 3	701	cleaning out
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	3,560	suspended
Imperial Valley Oil Co., well No. 1, Imperial Co.	32-11-10	2,980	suspended
San Marcos Oil Co., well No. 1, San Diego Co.	9-12- 2	rig	suspended
Turner, S. S., No. 1 Escondido, San Diego Co.	25-12- 2	2,170	suspended
McGregor Synd., No. 1 Del Mar, San Diego Co.	17-14- 3	1,260	sd. sh. drilling
Borderland Oil Co., No. 1 Encinitas, San Diego Co.	12-13- 4	2,414	hd. sd. drilling
Borderland Oil Co., No. 1 Point Loma, San Diego Co.	30-16- 2	2,400	gr. sd. drilling
Grey, H. H., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,525	fishing
Duncan, N. I., No. 1 Mohave, San Bernardino Co.	8- 4- 6	rig	suspended
Girard & Grimes, No. 1 Corona, San Bernardino Co.	8- 2- 8	1,468	fishing

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Standard, No. 1 Point Conception, Santa Barbara Co.	X- 5-34	4,500	br. sh. drilling
Universal Consd., No. 1 Pt. Conception, Santa Barbara Co.	30- 5-34	2,211	sd. sh. drilling
Ohio Oil Co., No. 1 Lompoc, Santa Barbara Co.	2- 6-34	4,685	sd. sh. drilling
Prairie Oil Co., No. 1 Lompoc, Santa Barbara Co.	15- 7-35	2,577	hd. sd. drilling
Vaqueros Oil Co., No. 1 Purisima, Santa Barbara Co.	5- 7-33	201	sd. drilling
Fields Gasoline Co., No. 1 Santa Maria, Santa Barbara Co.	8- 9-33	2,976	bl. sh. drilling
Barnsdall, No. 1 Gato Ridge, Santa Barbara Co.	9- 8-32	1,248	br. sh. drilling
Duell Pet. Co., No. 1 Santa Ynez, Santa Barbara Co.	9- 7-30	250	sd. drilling
Carey, A., No. 1 Goleta, Santa Barbara Co.	1- 4-28	2,880	suspended
General Pet., No. 1 Goleta, Santa Barbara Co.	21- 4-28	4,533	shut in
General Pet., No. 2 Goleta, Santa Barbara Co.	21- 4-28	4,350	cleaning out
General Pet., No. 136 Goleta, Santa Barbara Co.	21- 4-28	1,016	suspended
General Pet., No. 137 Goleta, Santa Barbara Co.	21- 4-28	1,026	suspended
General Pet., No. 138 Goleta, Santa Barbara Co.	21- 4-28	3,861	sd. sh. drilling
General Pet., No. 139 Goleta, Santa Barbara Co.	21- 4-28	1,035	suspended
General Pet., No. 143 Goleta, Santa Barbara Co.	21- 4-28	1,040	suspended
Boles Oil Co., No. 140 Goleta, Santa Barbara Co.	22- 4-28	50	suspended
U. S. Pet., No. 141 Goleta, Santa Barbara Co.	20- 4-28	1,035	suspended
U. S. Pet., No. 142 Goleta, Santa Barbara Co.	20- 4-28	1,032	suspended
U. S. Pet., No. 143 Goleta, Santa Barbara Co.	20- 4-28	1,019	suspended
Macmillan Pet., No. 134 Goleta, Santa Barbara Co.	21- 4-28	175	suspended
Bolsa Chica, No. 191 Goleta, Santa Barbara Co.	24- 4-29	mtl.	building rig
Caldwell Brown, No. 159 Goleta, Santa Barbara Co.	24- 4-29	25	suspended
El Camino Oil, No. 149 Goleta Tideland, Santa Barbara	22- 4-28	40	suspended
Frazer & Oliver, No. 173 Capitan, Santa Barbara Co.	4- 4-30	101	suspended
Indian Pet., No. 174 Capitan, Santa Barbara Co.	4- 4-30	230	suspended
McLaine, W. L., No. 175 Capitan, Santa Barbara Co.	4- 4-30	30	suspended
Durkee, R. S., No. 176 Capitan, Santa Barbara Co.	4- 4-30	30	suspended
Cunningham, W., No. 177 Capitan, Santa Barbara Co.	4- 4-30	30	suspended
Oakburn Oil Co., No. 168 Capitan, Santa Barbara Co.	4- 4-30	370	suspended
Oakburn Oil Co., No. 169 Capitan, Santa Barbara Co.	4- 4-30	200	suspended
Oakburn Oil Co., No. 170 Capitan, Santa Barbara Co.	4- 4-30	1,302	shut in
Oakburn Oil Co., No. 171 Capitan, Santa Barbara Co.	4- 4-30	300	suspended
Oakburn Oil Co., No. 172 Capitan, Santa Barbara Co.	4- 4-30	325	suspended
Wildcat Oil Co., No. 1 Santa Maria, Santa Barbara Co.	20-10-35	4,505	sd. sh. drilling
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
Shell, No. 1 Summerland, Santa Barbara Co.	18- 4-25	2,930	br. sh. drilling
Standard, No. 1 Casitas, Santa Barbara Co.	26- 4-25	2,380	hd. sd. drilling
Continental, Tideland permit No. 121, Santa Barbara Co.	33- 4-25	55	suspended
Continental, Tideland permit No. 122, Santa Barbara Co.	33- 4-25	410	sd. sh. drilling
Continental, Tideland permit No. 123, Santa Barbara Co.	33- 4-25	125	suspended
Continental, Tideland permit No. 124, Santa Barbara Co.	33- 4-25	4,005	sd. sh. drilling
Continental, Tideland permit No. 124-A, Santa Barbara Co.	33- 4-25	418	suspended
Continental, Tideland permit No. 125, Santa Barbara Co.	33- 4-25	120	suspended
Continental, Tideland permit No. 126, Santa Barbara Co.	33- 4-25	200	suspended
Continental, Tideland permit No. 127, Santa Barbara Co.	33- 4-25	145	suspended
Continental, Tideland permit No. 128, Santa Barbara Co.	33- 4-25	98	suspended
Continental, Tideland permit No. 129, Santa Barbara Co.	33- 4-25	97	suspended
Exeter Oil Co., Tideland permit No. 163, Santa Barbara Co.	32- 4-25	76	suspended
Getty, George F., No. 120 Carpinteria, Santa Barbara Co.	32- 4-25	1,024	set pipe
Getty, George F., No. 130 Carpinteria, Santa Barbara Co.	32- 4-25	55	cemented
Shell, No. 5 Oxnard, Ventura Co.	14- 2-20	rig	rigging up
Standard, No. 5-9 Saticoy, Ventura Co.	10- 2-22	8,529	redrilling
Prairie Oil & Gas, No. 1 Ventura, Ventura Co.	30- 3-22	4,457	redrilling
Bolsa Chica, No. 1-A Temescal, Ventura Co.	4- 4-18	2,250	oil sand
Fennell, E. A., No. 1 Lankershim, Ventura Co.	13- 4-19	1,660	hd. sd. drilling
General Pet., No. 1 Fillmore, Ventura Co.	6- 3-19	1,378	sd. sh. drilling
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	1,800	hd. sd. drilling
Calleguas Synd, No. 1 Camarillo, Ventura Co.	6- 1-20	880	hd. sd. drilling
Camarillo Synd., No. 1 Camarillo, Ventura Co.	33- 2-20	314	hd. sh. drilling
Pure Oil Co., No. 1 S. P. Canyon, Ventura Co.	15- 4-21	....	location
Milham Explt'n., No. 9 Buttonwillow, Kern Co.	8-28-23	4,990	fishing
General Pet., No. 1 Buttonwillow, Kern Co.	6-28-23	2,706	will deepen
Shell, No. 1 Lerdo, Kern Co.	23-28-26	1,010	sd. sh. drilling
Nordon Exp. Co., No. 1 Buttonwillow, Kern Co.	7-29-24	135	suspended
Shell, No. 1 Weed Patch, Kern Co.	29-30-29	3,880	gr. sd. drilling
Shell, No. 1 Edison, Kern Co.	33-29-29	4,082	hd. sd. drilling
Symark Oil Co., No. 1 Edison, Kern Co.	24-29-29	2,130	suspended
Sayre, F. M., No. 1 Edison, Kern Co.	5-30-29	4,220	fishing
Helen Pet., No. 1 Jasmine, Kern Co.	23-25-27	2,220	suspended
Shell, No. 1 Semitropic, Kern Co.	17-27-23	116	sd. drilling
Moran & DeCamp, No. 1 Mojave, Kern Co.	26-10-14	500	hd. sd. drilling
Bardeen, H. A., No. 1 San Emidio, Kern Co.	18-10-23	960	br. sh. drilling
Bardeen, H. A., No. 2 San Emidio, Kern Co.	10-10-23	1,692	sd. sh. drilling
Richfield, No. 1 Kreyenhagen, Fresno Co.	33-22-14	rig	rigging up
Currency Pet. Co., No. 1 Jacalitos, Fresno Co.	28-21-14	3,680	cleaning out
Knudsen, John, No. 1 Jacalitos, Fresno Co.	14-21-14	1,770	gr. sd. drilling
Petroleum Securities, No. 2 Huron, Fresno Co.	28-20-16	7,390	suspended
Fresno Madera Oil Co., No. 1 Clovis, Fresno Co.	18-12-21	4,360	sd. sh. drilling
Rio Grande, No. 1 Kerman, Fresno Co.	35-13-16	4,354	sd. sh. drilling
Western Gulf, No. 1 Penoche Valley, Fresno Co.	26-15-12	4,800	sd. sh. drilling
Midwest Refining Co., No. 1 Huasna, San Luis Obispo Co.	34-31-15	4,390	abandoning
Panorama Oil Co., well No. 1, San Luis Obispo Co.	7-31-21	4,019	fishing
Libby Pet., No. 1 Shandon, San Luis Obispo Co.	31-27-15	4,470	hd. sd. drilling
Paso Robles Synd., No. 1 Creston, San Luis Obispo Co.	27-27-11	3,904	hd. sd. drilling
Union, No. 1 King City, Monterey Co.	8-22- 8	3,250	suspended
Standard, No. 1 King City, Monterey Co.	23-22- 7	4,340	fishing
Pacific Inland Oil Co., No. 1 Parkfield, Monterey Co.	19-23-15	151	suspended
O'Donnell, J. E., No. 1 Dudley Ridge, Kings Co.	7-23-20	4,310	sd. sh. drilling
Penn Western, No. 1 Tulare Lake, Kings Co.	24-21-18	1,338	suspended
Wellport Oil Co., No. 1 Devils Den, Kings Co.	9-24-17	3,664	fishing
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	3,300	hd. sd. drilling
Barnhart Trust, No. 1 Oakdale, San Joaquin Co.	3- 2-10	3,340	sd. sh. drilling
White, Roy, No. 1 Pixley, Tulare Co.	8-23-26	4,020	suspended
Terra Bella Oil Co., No. 1 Porterville, Tulare Co.	35-22-27	900	recemented

Penn Pool May Be Defined to North

Irion County Has Best Well Yet Found. Yates Pool Producers to Discuss Continuance of Allowance Order

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 13.—Southern Crude Oil Purchasing Co.'s No. 1 Eaton, in Section 35, Block 3, H.&T.C. Survey, a northwest extension well of the Pecos Valley Pool, Pecos County, was plugged back to 1,664 feet and put on pump and is now making 18 bbls. daily.

The Penn Pool, Ector County, is apparently defined on the north by the Independent Oil & Gas Co. and Tidal Oil Co.'s No. 1 Eidson, in the NW cor., Section 6, Block 44, three-quarters of a mile northwest of Shell's producer. The Independent well is shut down at 3,800 feet with but insignificant showings of oil which may possibly be shot.

Transcontinental Oil Co.'s No. 1 University, on the south end of the Penn Pool, in Section 3, Block 35, topped salt 69 feet higher than Landreth Production Co.'s producer to the north and is looking exceedingly favorable for production if the salt marker in this pool can be relied upon. Top of salt was 1,140 feet and it is drilling ahead at 1,750 feet.

The Shell Pipe Line Co. has completed its survey for an 8-inch line to the Hobbs area, New Mexico, from Winkler County, and will commence laying line. The Humble Pipe Line Co. tested its 8-inch line to the Hobbs area and started running oil on May 7. Atlantic Pipe Line Co. will start laying line at once.

Transcontinental Oil Co.'s No. 3 White & Baker, 3 miles west of Yates Pool production, in Section 7, Block Z, topped a pay at 1,900-15 feet and filled up 400 feet with oil. It struck water at 1,948 feet and will be plugged back to produce from above pay. This is in Pecos County.

Made 15,000,000 Feet

California Co.'s No. 1 Iowa Trust, Section 21, Block 10, H.&G.N. Survey, is shut down at 1,558 feet after encountering a showing of gas at 1,515 feet, with an increase at 1,535 feet, making an estimated 15,000,000 feet of wet gas. This test is in the Pecos Valley Pool, Pecos County.

Carl Cromwell's No. 22 Nutt, in Subdivision P, Gonzales County School Land, Irion County, is the best well yet found in this area, the well making around 11 bbls. per hour from a total depth of 1,451 feet, but top of the pay was found at 1,435 feet. The San Angelo Refining Co. is taking the oil which is piped through a 2-inch pipe laid by Cromwell from the well to a loading rack on the Santa Fe Railroad 2½ miles to the west, the oil being shipped to San Angelo via tank cars.

P. H. Williams' No. 1 Ashe, in Washington County School Lands, Irion County, the deepest cable tool test in the world, may be deepened from the present total depth of 8,890 feet. It was 200 feet lower on the Ordivician than the deep producers in the Big Lake Pool, Reagan County, 33 miles to the west.

Yates Pool Proration

A meeting of Yates Pool producers will be held at Fort Worth May 16 to discuss the question of continuing the present temporary 110,000-bbl. daily allowance order. It is not known just what move will be made or whether the allowance will remain the same. On May 12 Penn Pool's production, Ector County, was 13,793 bbls. from 26 wells.

Deep Rock Oil Co.'s No. 1 King, in Section 11, Block A-46, Andrews County, south offset to its No. 1 Ogden, the discovery well, encountered an estimated 250,000 feet of gas at 4,160 feet and is drilling ahead at 4,265 feet with no increase in gas or showings of oil. Its No. 1 Mathis and No. 1 Miles are both setting 6-inch casing at 4,100 feet. No. 1 King is about due for the oil pay horizon found in the discovery and this week should prove whether the pool will get its second producer.

Cranfill & Reynolds' No. 1 Tubbs, the interesting wildcat test in western Crane County, is still fishing tools at 2,420 feet. It had a showing of gas at 1,410 feet and more gas from 1,595 to 1,610 feet.

Texas Pacific Coal & Oil Co.'s No. 1 McKenzie, in Section 28, Block 45, on north end of Penn Pool, Ector County, and northwest of the Independent test, is showing up with only one-half bailer of oil per hour from 3,790 feet.

WEST TEXAS COMPLETIONS
Week Ending May 10

Ector County

Cosden Oil Co.'s No. 2-A University, top of pay 3,620 feet, initial production 958 bbls.; total depth 3,700 feet. Humble Oil & Refining Co.'s No. 5-D Kloh & Rumsey, top of pay 3,678 feet; shot with 160 quarts from 3,677-3,726 feet; initial production 391 bbls.; total depth 3,726 feet. Humble Oil & Refining Co.'s No. 6-D Kloh & Rumsey, top of pay 3,658 feet; total depth 3,759 feet; plugged back to 3,734 feet, and shot with 150 quarts from 3,659-3,734 feet; initial production 1,024 bbls. Humble Oil & Refining Co. and others' No. 4 York, top of pay 3,605 feet; total depth 3,710 feet; initial production 731 bbls.; shot with 250 quarts from 3,610-3,710 feet. Shell Petroleum Corp.'s No. 1 Jones, top of pay 3,615 feet; shot with 120 quarts from 3,657-3,705 feet; initial production 856 bbls.; total depth 3,760 feet.

WILDCAT OPERATIONS IN WEST TEXAS

Week Ended May 12

Company, farm and location—	Remarks—
ANDREWS COUNTY	
Deep Rock Oil Co. et al's No. 1 Mathis, 900 ft. from S and W. Sec. 4, Blk. A-46, Public School Land	Top salt 1,730 ft. drlg. 3,835 ft.
Deep Rock Oil Co.'s No. 1 Miles, 990 ft. S, 1,650 ft. E of NW cor., Sec. 22, Blk. A-46, School Land	2,000,000 ft. gas at 2,913-16 ft.; drlg. 3,960 ft.
Fuhrman Pet. Corp.'s No. 1 Ford, 440 ft. from S and 2,200 ft. from W of Sec. 16, Blk. A-43, Public School Land	Drlg. 1,780 ft.
Deep Rock Oil Co. et al's No. 1 King, 330 ft. from N and 2,310 ft. from E. Sec. 11, School Blk. A-46	Top salt 1,697 ft.; drlg. 4,112 ft.
R. R. Penn's No. 1 Wilson, C, Sec. 20, Blk. A-37, School Blk.	Drlg. 875 ft.
BORDEN COUNTY	
Phillips et al's No. 1 Goode, 330 ft. N and E of SW cor. SE of Sec. 46, Blk. 33, Twp. 4n, T.&P.R.R. Sur.	To plug; total depth 3,875 ft.
BREWSTER COUNTY	
Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	Shut down 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE, Sec. 100, Blk. 2, G.C.&S.F. Sur.	Shut down 1,250 ft.; hole full water 1,135-85 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 920 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-15, G.C.&S.F. R.R. Sur.	Show oil 1,830 ft.; shut down 2,290 ft.
Van McPhail's No. 1 McIntyre, SE cor., Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,750 ft.
COKE COUNTY	
Arkansas Fuel Oil Co.'s No. 1 Stepp, 1,020 ft. NE, 2,340 ft. W of SE cor., Sec. 35, Blk. 1-A, H.&T.C. Sur.	Drlg. 1,655 ft.
Cates & Fitzhugh's No. 1 Mimms, 660 ft. N and W of SE cor., Sec. 39, Blk. W, T.&P.R.R. Sur.	Location.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H.&T.C. Sur., elev. 2,750 ft.	Shut down 3,050 ft.
CONCHO COUNTY	
Duffy et al's No. 1 Callan, 1,520 ft. N and 1,120 ft. W of SE cor., Sec. 21, Blk. 10, H.&T.C.R.R. Sur.	Spudded and shut down.
Turner et al's No. 1 Borsig, 150 ft. from S of NE cor., G. Emmig Sur. 130, 6 mi. W of Paint Rock	Shut down 735 ft.

(Continued on Page 110)

WEST TEXAS PRODUCTION

County—	Wells	Prod.
Andrews	1	164
Crane	342	33,617
Crockett	46	1,541
Ector	22	13,065
Fisher	7	925
Garza	5	48
Glasscock-Howard	509	38,860
Jones	73	1,382
Loving	21	1,190
Mitchell	145	1,989
Pecos	448	119,435
Reagan	259	16,625
Runnels	3	18
Scurry	5	14
Taylor	2	99
Upton	249	8,955
Ward	24	1,460
Winkler	864	78,395
Total this week	2,765	317,773
Total last week	2,756	318,939
Difference	9	1,166

Glasscock County

F.H.E. Oil Co.'s No. 1 Cox was dry and abandoned at 3,411 feet. California Oil Co.'s No. 1 Baker, top of pay 2,238 feet; initial production 45 bbls. per hour for three hours on pump; total depth 2,297 feet.

Pecos County

Continental Oil Co.'s No. 1 Bennett was dry and abandoned at 2,005 feet. Dixie Oil Co.'s No. 1 Tippett, top of pay 328 feet, initial production 200 bbls.; total depth 425 feet. Moore's No. 1

(Continued on Page 108)

Van Field, Van Zandt County, East Central Texas.

Big Gas-Lease Campaign in Panhandle

Hansford, Moore and Sherman Counties Scene of Gas Men's Operations. Increased Activity in Young and Archer Counties

By L. E. Bredberg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 12.—Dana Oil & Gas Co.'s No. 1 Feltz, in southeastern Hartley County, which showed up last week as a possible discovery is now shut down at 3,770 feet making 1½ bbls. of sulphur water per hour. It topped a gas formation at 3,565 feet and made an estimated 12,000,000 feet and drew considerable attention to that wildcat area.

Approximately 40,000 acres have been purchased in Hansford, Moore and Sherman Counties by several companies having intentions of producing a large volume of gas. One of the principal purchasers is the Texas Interstate Pipe Line Co. which is building a 24-inch gas line from the Panhandle through Kansas and up into Missouri and Illinois.

Empire Gas & Fuel Co. and Humble Oil & Refining Co. have also been large buyers. The former company is a subsidiary of the Cities Service Co., which is a part owner of the long gas line which is to run into the northern states and carry large gas supplies from the Panhandle.

Cockrell & McIroy's No. 1 Simms, in the White Deer area near the Empire discovery in Carson County is drilling ahead below 3,135 feet making 43,000,000 feet of gas from granite wash encountered at 3,110 to 3,135 feet.

Gulf Production Co.'s No. 1 Donald, located in the J. Guffy Survey, 17 miles southwest of Gainesville in Cooke County showed up as a possible discovery for that part of the county when it encountered a small oil showing at 2,693 feet and made 13 bbls. of oil before drilling ahead. It is now shut down at 2,900 feet, but will be drilled deeper.

Faith Oil Co.'s No. 1 Sugg, about 2½ mils east of the above well, in the Harriet Nail Survey, encountered a hard sand at 1,315-19 feet and had an oil showing in lime from 1,319-27 feet. Casing was set to test the well.

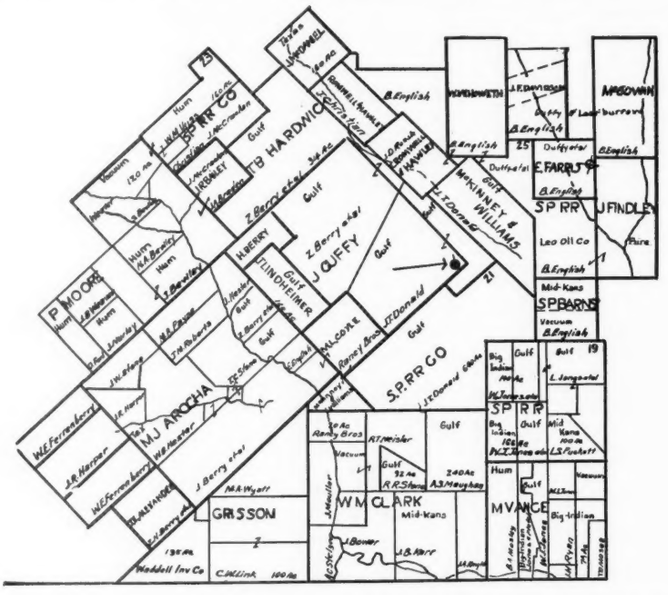
These two showings will tend to make this area in Cooke County more interesting and a lease and royalty play will no doubt be precipitated because of these showings. Another few days should give a good insight into the possibilities of the area.

Hutchinson County scored the majority of producers in the Panhandle district this week, five of the six completions going to the Phillips Petroleum Co., their best well averaging over 1,000 bbls. on initial production and the smallest well making only 19 bbls. of oil and 19 bbls. of water.

Young and Archer Counties both reported many completions and locations during the week, the Graham and Olney Pools being the hottest areas in the former county, the Graham Pool having been revived by the discovery of the largest well in the history of North Central Texas, the Nash & Windfohr's No. 1 McCloud, which was completed for an initial production of 1,000 bbls. per hour a few weeks ago. Since that time many leases around Graham have changed hands and many locations were made to seek the deep pay horizon from which that well is producing.

Gibson & Johnson's No. 1 Bingham, south offset to the Shell and Dunnigan discovery well in the Guadalupe County School Lands, Taylor County, is shut down at 2,100 feet flowing about 15 bbls. of oil and 15 bbls. of water daily from behind the casing due to a poor cementing job. Plug is to be drilled and the casing recemented. The well is producing from a sandy lime at 2,095 feet and will make the second producer for this immediate area, although there is another small producer 2½ miles to the south owned by Adams, Ferguson & Hobbs, and a west offset to that well looks good for a small producer. It topped the pay at 2,370 feet and another at 2,394 feet. It was shot with 60 quarts from 2,374-93 feet and is now cleaning out.

Oil Co.'s No. 1 Foils had oil show at 1,362 feet, initial production 161 bbls. with total depth of 1,372 feet. L. T. Burns' No. 7 Foils had oil show at 1,379 feet, initial production 50 bbls., total depth of well 1,388 feet. L. T. Burns' No. 8 Foils had oil show at 1,363 feet, initial production 100 bbls., total depth of well 1,366 feet. J. H. Massie's No. 10 Richardson had oil show at 1,388 feet, initial production 8 bbls., total depth of well 1,391 feet. Moran Drilling Co. and Fuel Oil & Gas Co.'s No. 4 Scott was dry and abandoned at 1,174 feet. Pandem Oil Corp.'s No. 1 Hudson was dry and abandoned at 1,483 feet. Perkins & Cullum's No. 1 Falls Co. fee had top of pay at 1,135 feet with initial production of 16 bbls and total depth of well was 1,151 feet. Perkins & Cullum's No. 1 Campbell B. Co. was dry and abandoned at 1,371 feet. Virgil Oil & Gas' No. 5 Harmel had oil show at 1,424 feet, initial production was 56 bbls., with total depth of 1,439 feet.



Plat showing location of Gulf Production Co.'s No. 1 Donald, 17 miles southwest of Gainesville in the J. Guffy Survey, Cooke County. This test has encountered two good oil showings, putting 90 bbls. of 40.2 gravity oil in the tanks in six hours, and promising the first oil pool for that part of the county.

WICHITA FALLS COMPLETIONS
Week ending May 11

Archer County

Barnsdall Oil Co.'s No. 14 Wilson had oil show 1,714 feet, dry and abandoned at 1,850 feet.

C. P. Burton's No. 1 Wilson was dry and abandoned at 1,553 feet. Bridwell

Baylor County

Grisham and Barnsdall's No. 3 Portwood, oil show 1,390 feet; initial production 65 bbls.; total depth 1,405 feet.

Clay County

Ray Dawson's No. 1 Robinson was dry and abandoned at 2,052 feet.

Cooke County

Lloyd Oil Corp.'s No. 6 Wheelock was dry and abandoned at 1,363 feet.

Grayson County

F. H. E. Oil Co.'s No. 2 Finke was dry and abandoned at 900 feet.

Montague County

Arco Oil Co.'s No. 3 Salmon had oil show at 1,670 feet, initial production 55 bbls., total depth of well was 1,693 feet. Bridwell Oil Co.'s No. 4 Dennis had oil show 1,710 feet, initial production 78 bbls., total depth of well was 1,718 feet. Bridwell & Cono Co.'s No. 1 McGoreghy had oil show at 1,268 feet, initial production 165 bbls., total depth of well 1,302 feet.

NORTH TEXAS PRODUCTION
Week ending May 11

Panhandle District—	Prod.
Carson County	9,005
Hutchinson County	24,805
Gray County	68,261
Moore County	473
Potter County	29
Wheeler County	925
Total this week	103,498
Total last week	103,379
Increase	119
Wichita Falls District—	
Archer County	19,141
Baylor County	1,370
Clay County	737
Cooke County	3,905
Foard County	221
Jack County	3,846
Haskell County	53
Montague County	6,876
Throckmorton County	1,258
Wilbarger County	24,290
Young County	18,902
Wichita County	25,838
Total this week	106,437
Total last week	105,543
Increase	894
Ranger District—	
Brown County	6,740
Callahan County	3,810
Coleman County	4,355
Comanche County	385
Palo Pinto County	650
Eastland County	5,160
Shackelford County	6,560
Stephens County	6,203
Total this week	33,863
Total last week	33,031
Increase	832
Grand total this week	243,798
Grand total last week	241,953
Increase	1,845

Wichita County

Arkansas Fuel Oil Co.'s No. 30 Kemp & Kempner had oil show at 1,775 feet, initial production 73 bbls., with total depth of 1,770 feet. Clark and others' No. 3 Bickley was dry and abandoned at 1,210 feet. Conoco's No. 6 Waggoner Brothers had oil show at 1,865 feet, initial production 165 bbls., with total depth of well 1,869 feet.

Humble Oil & Refining Co.'s No. 24 Taylor had show at 1,754 feet, initial

(Continued on Page 107)

WILDCAT OPERATIONS IN TEXAS PANHANDLE
Week Ending May 12
CARSON COUNTY

Company, well, farm, name, section and block—	Remarks—
Danciger O. & R. Co.'s No. 1 Block, 330 ft. N and E lines, Sec. 112, Blk. 4, I.&G.N. Sur.	S.D. 2,985 ft.
Danciger O. & R. Co.'s No. 1 Byrum, 990 ft. N, 330 ft. W, SW, Sec. 188, Blk. 3, H.&G.N. Sur.	Drlg. 2,130 ft.
Delmar Oil Co.'s No. 5 Noel, 330 ft. S and W, NE cor. W½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	S.G. 3,000-10 ft.; S.D. 3,131 ft.
Cockrell-McIlroy Oil Co.'s No. 1 Eller, 330 ft. S and W, NE cor. NW, Sec. 200, Blk. 3, I.&G.N. Sur.	Drlg. 3,257 ft.
Cockrell-McIlroy Oil Co.'s No. 1 Simms, 330 ft. S and E, E 140 ac., N 160 ac., S 320 ac., Sec. 11, Blk. 7, I.&G.N. Sur.	Drlg. 3,135 ft; 43,000,000 ft. gas 3,110-35 ft.
Empire G. & F. Co.'s No. 1 Archer-B, 330 ft. N and E, SW cor. SW, Sec. 139, Blk. 3, I.&G.N.R.R. Sur.	Location.
Empire G. & F. Co.'s No. 2 Fields, 990 ft. N and W, Sec. 13, Blk. 4, I.&G.N. Sur.	Drlg. 1,050 ft.
Gibson Oil Corp.'s No. 1 Moore, 990 ft. N, 330 ft. E, N½, SE, Sec. 20, Blk. 7, I.&G.N. Sur.	Location.
H.A.M. Oil Co.'s No. 1 Cooper, 330 ft. S and W, E½ NE, Sec. 5, Blk. 9, H.&G.N.R.R. Sur.	T.D. 3,105 ft.; 2,000 ft. oil in hole.
Humble O. & R. Co.'s No. 2 Combs-Worley, 330 ft. S, 240 ft. E, NW cor. N½ SE, Sec. 36, Blk. 3, I.&G.N. R.R. Sur.	Location.
McClintock et al's No. 2 Garner, 330 ft. W and S of E 55 ac. of N 80 ac., NW, Sec. 105, Blk. 4, I.&G.N. R.R. Sur.	S.D. 2,260 ft.
Phillips Pet. Co.'s No. 1-A Garner, 430 ft. S line, 330 ft. W, Sec. 114, Blk. 4, I.&G.N. Sur.	Drlg. 3,180 ft.
Phillips Pet. Co.'s No. 1 Pickens, 990 ft. E line, 230 ft. N line, NE cor., Sec. 31, Blk. 7, I.&G.N.R.R. Sur.	Drlg. 1,020 ft.
Prairie O. & G. Co.'s No. 2 Nail, 330 ft. N and W lines, N½ E½ SE, Sec. 198, Blk. 3, I.&G.N. Sur.	10,000,000 ft. gas 2,830-2,985 ft.; S.D. 3,123 ft.
Shamrock O. & G. Co.'s No. 1 Thompson, 330 ft. S and W lines, E 80 ac., NE, Sec. 5, Blk. 7, I.&.G.N. Sur.	C.O. 2,430 ft.
Shell Pet. Corp.'s No. 1 Percival, 330 ft. N and E, SE. Sec. 199, Blk. 3, I.&G.N. Sur.	Set 8-in. csg.; T.D. 2,411 ft.
Skelly Oil Co.'s No. 19 Schafer, 330 ft. N, 990 ft. E, SW cor. NE, Sec. 198, Blk. 3, I.&G.N. Sur.	6,000,000 ft. gas 2,895-2,970 ft.; C.O. 3,100 ft.
Suloch Oil Co.'s No. 1 Bost, 990 ft. S, 330 ft. E, SW, Sec. 1, Blk. S.&F.	U.R. csg; T.D. 1,124 ft.

(Continued on Page 108)

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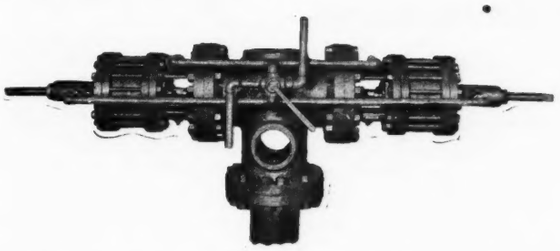

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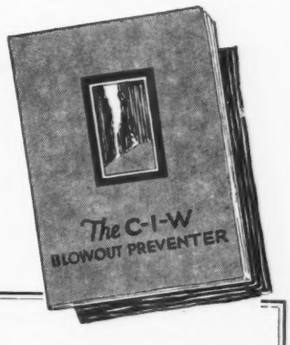

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Pipe Line Construction News

BAKER-WILLISTON LINE FIRST LINK IN SYSTEM

CASPER, Wyo., May 12.—The Canadian government at Ottawa has issued an official statement permitting the exportation of natural gas from Canada into Montana. The permit to export is limited to 75,000,000 feet daily and was issued to the Range Oil & Gas Co., but the Canadian government also states that the permit can be made larger on application in case the need of a larger exportation appears needful.

It had been considered, from the trend the Canadian government officials have taken on the exportation of natural gas from Canada to the United States, that the government would insist that this gas be exported to St. Paul and Minneapolis as the twin cities offered what was considered the best market for the gas. However, the oil and gas men represented to the government that it would be very expensive to lay a pipe line to the twin cities at this time, but that in the future such a project may be completed and the line would in the meantime, serve many cities and towns along the route. As there were not enough cities and towns in Canada to warrant the laying of such a line, it was readily shown that the best route lay on the American side and the Dakota-Montana Power project that is being laid from Baker, Mont., to Williston, N. Dak., is thought to be the first link of a great natural gas distribution system that will eventually cover Montana and many other states.

CONSTRUCTION BEGUN

CALGARY, Alberta, May 10.—Work to construct a pipe line through to Montana from the Turner Valley oil fields has been begun. It will cross the border at Coutts and enter the Shelby and Fort Benton districts of Montana. Exportation will be under the direction of Range Oil & Gas Co. of Calgary, in co-operation with Oil Association of Montana, which includes several organizations along the border.

Only the waste gas from which gasoline has been extracted will be shipped through the border-crossing pipe line under the government permit. The project has been under discussion for a year. The government first had to decide the probable life of the gas supply, whether this supply would be needed locally in the future, and the effect of such exportation of gas by pipe line upon the quantities of gas running through other properties in the field. Each of these three factors was decided in favor of the Montana interests that want the gas.

SOUTHERN SALE COMPLETED

OIL CITY, Pa., May 10.—Southern Pipe Line Co. officials announce that the sale of part of their pipe lines, extending from the West Virginia-Pennsylvania line near Morgantown, W. Va., to Millway, Pa., was completed to the Manufacturers Light & Heat Co. May 1 after approval by the Public Service Commission. The sale price was approximately $500,000.

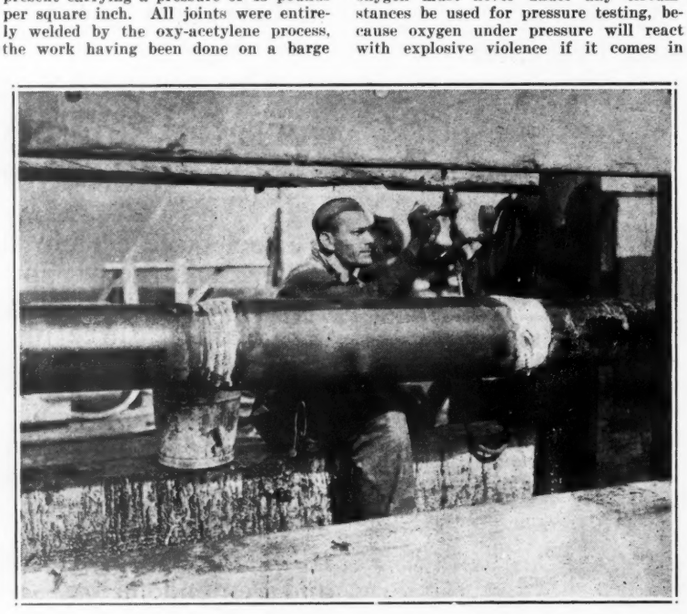
The Manufacturers Light & Heat Co. sought the pipe lines for use in supplying the Philadelphia area with natural gas from West Virginia.

TEXAS-CHICAGO CONTRACT

PITTSBURGH, Pa., May 12.—The National Tube Co. has secured a contract for 280 miles of 24-inch pipe for the gas line to be laid from Texas to Chicago.

NOVEL PIPE JOINT DESIGNED FOR HUDSON RIVER CROSSING

An 8-inch gas line crossing the Hudson River from Beacon to Newburgh, N. Y., where the river is somewhat over a mile in width, has recently been completed by the Central Hudson Gas & Electric Corp. This line is of extra heavy pipe, designed for an ultimate pressure of 100 pounds per square inch and at present carrying a pressure of 45 pounds per square inch. All joints were entirely welded by the oxy-acetylene process, the work having been done on a barge and the pipe lowered away into the river bed as the welding progressed and the barge was moved forward.



Special joint for river crossing.

A type of joint having several interesting features was designed and used for this river crossing. It consists of a standard butt weld reinforced by a short piece of 9-inch standard pipe which fits over the butt weld and is welded to the pipe at both ends with fillet welds. This type of joint has several advantages. In the first place it stiffens the pipe at the joint against bending stresses, which may be very severe at times during the laying of the pipe from the barge. The sleeve also provides an extra factor of safety since two welds would have to prove defective before leakage could occur at any joint. Possibly the greatest advantage of this type of joint, however, is the time and trouble saved in testing the joints.

Each of the 9-inch pipe sleeves was provided with a hole threaded for a one-eighth-inch pipe nipple. Because an air compressor capable of providing the high test pressure required was not available, compressed nitrogen was used for testing. This was supplied at 1,000 pounds pressure in cylinders similar to oxygen cylinders. It is well understood that oxygen must never under any circumstances be used for pressure testing, because oxygen under pressure will react with explosive violence if it comes in contact with oil or grease. Testing procedure was as follows: A cylinder of compressed nitrogen was connected to the five-thirty-seconds-inch annular space between pipe and sleeve by means of one-eighth-inch pipe, fitted with a valve and pressure gauge. The pressure was brought up to 350 pounds per square inch and soap suds were painted on the sleeve welds. It the pressure dropped and no leaks in the sleeve weld could be detected, this would indicate the center butt weld was faulty and the pipe would have to be cut and rewelded. This did not happen once during the entire operation. The annular space had a volume of about one-tenth cubic foot and only nine cylinders of nitrogen were used in testing 163 joints in the crossing. A great saving of time and effort was effected by this method of testing compared to pumping up the whole pipe.

WILLIAMSON COUNTY LINE

FORT WORTH, Tex., May 10.—Construction will soon be under way on the first pipe line facilities for the Williamson County Serpentine Pool, according to announcement by Roy A. Westbrook, local operator, who, with associates here, will construct the line. P. W. Woodruff, formerly of the Southern Crude Oil Purchasing Co., is among those associated in the project and will handle the oil marketing end.

The line, which is expected to be in operation in 25 days, will be an 8-mile 4-inch line from the pool to a loading rack on the International-Great Northern Railroad at Thrall. Westbrook is also preparing to erect two 55,000-bbl. storage tanks near the terminus of the line. He is drilling in his third producer on an edge lease in the pool. In addition, he has a contract on the output of the big well of Anderson and others, which gauged over 300 bbls. per hour for three hours after completion and was then shut in for storage.

ONTARIO LINE WORK

CHATHAM, Ontario, May 10.—In Lambton County, Ontario, the Union Natural Gas Co. of Chatham has commenced the laying of pipe from the end of its existing line at Oil City to serve Alvinston and Inwood, where franchises were recently secured.

KETTLEMAN HILLS GAS FOR LOS ANGELES LINE

LOS ANGELES, Calif., May 10.—Pacific Lighting Corp. is preparing to build a natural gas pipe line to deliver Kettleman Hills, Buttonwillow and Elwood natural gas to Los Angeles. The plan calls for a line with capability of 150,000,000 feet a day by 1931.

Pacific Lighting Corp. has acquired a 10 per cent Class B voting stock interest in Pacific Public Service Corp., subsidiary of the Standard Oil of California, and an agreement has been made whereby Standard will furnish natural gas for the pipe line to be built by Pacific Lighting from San Joaquin Valley fields to Los Angeles.

Standard acquired the entire issue of the Class B voting stock of Pacific Public Service by outright purchase from the Fitkin interests last year.

SHIPPING PIPE FOR OMAHA LINE

FORT WORTH, Tex., May 12.—Pipe for the Missouri Valley Gas Co.'s line from the Panhandle in Texas to Kansas and Omaha, Neb., and Council Bluffs, Iowa., where the Lone Star Gas Co. has interests, is being shipped at the rate of 2 miles per day, and two more pipe parties are being added to the force which is already busy laying this line. Fire parties are keeping ahead of the work, with the survey, and gas is expected to be pumped into Lincoln, Neb., by August 1.

The line is a 24-inch coupled line owned by the North American Light & Power Co., United Light and Power Co. and the Lone Star Gas Co. which have gas producing properties in Stevens County, Kansas, and large gas reserves in the Panhandle.

North American Light & Power Co. recently acquired natural gas acreage of Shell Petroleum Corp. in Amarillo field. Under agreement, North American will sell all oil produced from that acreage to Shell Corp.

GAS LINE TO ARIZONA?

An Associated Press dispatch from Tucson, Ariz., says: Phelps-Dodge Corp. and the Calumet & Arizona Mining Co. are about to close negotiations whereby natural gas will be piped into Arizona from Oklahoma and Texas oil fields and delivered at their smelters for 30 cents a thousand feet, according to the Arizona Daily Star. It was said that Douglas, Ariz., consumers will be allowed to tap the line at the Douglas City limits for the same cost and that other Arizona cities will be allowed to use the gas if desired. The pipe line will cost approximately $5,000,000.

JIM HOGG-ZAPATA LINE

SAN ANTONIO, Tex., May 12.—Humble Pipe Line Co. is laying a 4-inch line from its Randado Field pipe line in Jim Hogg County west to the new producing spots in Zapata County east of the Jennings gas field. It is a distance of about 6 miles west of the Randado Pool. Muckelroy some months ago brought in the discovery well.

TAKING UP PIPE SAMPLES

Kirk H. Logan of the Bureau of Standards, in charge of pipe line soil corrosion work is now in California taking up pipe samples that were buried eight years ago to demonstrate soil corrosion affect.

TEN WILDCAT LOCATIONS MADE IN EAST CENTRAL TEXAS FIELD

By L. E. Bredburg
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., May 12.—Ten wildcat locations were made in this area during the week. There are now 37 producers in the Van Field, Van Zandt County, Humble's No. 1 Freeman, the company's first well in the field, was finally successfully plugged back and water shut off making a small producer. It is on the eastern side of the field. Many locations are being staked each week and rigs moved in to speed up the work on acreage which it is necessary to drill.

Henderson County suffered another setback this week when Cranfill & Reynolds' No. 1 Broom, in the Samuels Chears Survey, was abandoned at a total depth of 4,700 feet, in shale and sand. Base of the Austin was found at 4,070 feet in this test. Shell Petroleum Corp.'s No. 1 Stephens, near La Rue in eastern Henderson County, is fishing at 3,691 feet in shale with no interesting showings.

The Magnolia Petroleum Co. abandoned its No. 1 Wiley, in the Aquilla Mavis Survey in Rusk County, at a total depth of 3,295 feet, proving another area in East Texas unproductive. Upchurch's No. 1 Owlet Green school house test, 4 miles southwest of the Van Pool in Van Zandt County is a dry hole. It was completed at a total depth of 3,073 feet. Top of the Austin chalk in this test was 2,986 feet. Elevation was 495 feet.

West Texas Oil & Royalty Co.'s No. 1 Negro Orphanage, near Mineola, in Wood County, was abandoned at a total depth of 4,610 feet in shale. This was one of the most interesting tests of the East Texas district for sometime.

Cranfill & Reynolds have moved a machine in on their Coker tract northeast of the Van Pool and will try to pick up a producing horizon around 1,400 feet where they encountered a showing of oil in their No. 1 Coker which was abandoned 100 feet south of the new location. This will be an interesting test from the standpoint of those watching for shallow production.

Boggy Creek	3,590
Cedar Creek	55
Currie	372
Hill County	45
Mexia	4,232
Minerva	588
Nigger Creek	205
Powell	5,832
Richland	235
Thrall	42
Van	22,964
Wortham	840
Total East Central Texas	39,000
Week ending May 3	37,197
Increase	1,803

EAST CENTRAL TEXAS COMPLETIONS
Week Ending May 10

Anderson County

Sun Oil Co.'s No. 1 Bowers in the E. J. Mayers Survey was abandoned as dry at a total depth of 1,650 feet; top of Pecan Gap was logged at 952 feet, bottom at 1,120 feet; top of Georgetown was logged at 1,350 feet.

Henderson County

Cranfill & Reynolds and others' No. 1 A. J. Broome, in the Samuel Chears Survey, was abandoned at a total depth of 4,700 feet.

Freestone County

Cranfill & Reynold's No. 1 Bonner, in the S. F. Ballou Survey, was completed as a "duster" at a total depth of 3,868 feet; Austin chalk was topped at 3,015 feet and the base was found at 3,393 feet.

Van Zandt County

Pure Oil Co.'s No. 4 Jarman was completed for an initial production of 990 bbls. on a half-inch choke; total depth 2,885 feet; sand record not available. Pure Oil Co.'s No. 3 Thompson was completed for an initial production of 1,082 bbls. through a half-inch choke; total depth 2,836 feet; no sand record given out by the company. Pure Oil Co.'s No. 1 Tunnell made an initial production of 997 bbls. through a half-inch choke; total depth 2,880 feet; no sand record given.

EAST CENTRAL TEXAS WILDCATS

Week Ended May 10

ANDERSON COUNTY

R. H. Keen's No. 1 Murdock, 800 ft. S and 175 ft. E of NW cor. Broomfield Sur. ..... **S. D. 100 ft.**

Navarro, Sun and Humble's No. 1 Gardner, 1,150 ft. from N and 150 ft. from E of 147.5-acre tract in M. M. Salizar Sur. ..... Spud and S. D.

Sun Oil Co.'s No. 1 Bowers & Maier, 150 ft. S, 150 ft E of No. 1, E. G. Mayers Sur. ..... Moving in material.

FREESTONE COUNTY

Killam & Phillips' No. 1 Killam, 150 ft. from N and 1,310 ft. E of 272½-ac. tract, A. Sanchez Sur. ..... S. D. 1,796 ft.

HENDERSON COUNTY

H. B. Ashburn et al's No. 1 T. E. Barry, center of Barry's 59-acre tract in A. York Sur. ..... **S. D. 1,875 ft.**

Chapman's No. 1 Cade, 1,662 ft. from N and 3,294 ft. from W of J. B. Dorsey Sur. ..... Drlg. 3,002 ft.

Cranfill & Germany's No. 1 Stow, 2,582 ft. E, 785 ft. S. Guadalupe Acosta Sur. ..... Location.

George Pace et al's No. 1 Mrs. Sarah Anthony, 150 ft. E, 150 ft. S of Anthony 73-ac. tract, Jose W. Battvan Sur. ..... Derrick.

Shell's No. 1 Stephens, 760 ft. from S. 830 ft. from E lines I. D. Owens Sur., S. T. Stephens 118-ac. tract ..... **T. D. 3,695 ft.**

HUNT COUNTY

Branson et al's No. 1 West, 350 ft N, 350 ft. W of W 60-ac. tract, Jas. Rooces Sur. ..... Derrick.

KAUFMAN COUNTY

Sowell et al's No. 1 Ables, 1,200 ft. from SE, 1,000 ft. from SW of Ables' 233-acre tract, Elizabeth Ables Sur. ..... S. D. 430 ft.

RAINS COUNTY

Everett & Morrison's No. 1 Franklin, 640 ft. from S and E of 75-acre tract in John Christian Sur., 6 miles SE of Emory ..... **Location.**

Owens & Sloan's No. 1 Hill, 150 ft. out of NW cor. of 150-ac. tract, T. McMahon Sur. ..... Drlg. 1,625 ft.

RUSK COUNTY

Mass et al's No. 1 Mathews, 2,244 ft. from N, 4,356 ft. from E, Dalines Cartinas Sur. ..... Old well to be deepened from 2,338 ft.

Canfill & Reynolds' No. 2 Dr. C. S. Coker, 100 ft NE of No. 1, Wm. Daniel Sur. ..... Machine.

SMITH COUNTY

Adair & Daniels' No. 1 Porier, 200 ft. S of S line of Wm. H. Malone Sur. and C of W half of S line of survey in David Wilson Sur. ..... Top Navarro 2,033 ft, T. D. 2,037 ft.

Owen Sloan Oil Co.'s No. 1 Starnes, 846 ft. along W lines of John Waller Sur. from NE cor. of J. O. Dillard Sur. and 80 ft. E at right angles to W line of J. Waller Sur. ..... **S. D. 1,322 ft.**

Sutton et al's No. 1 W. D. Hammond, 150 ft. out of SW cor. W. D. Hammond tract in Jas. Reed Sur. ..... Drlg. 3,525 ft.; top Austin chalk 3,522 ft.

Winona O. & G. Co.'s No. 1 Freeman, 150 ft. from S, W of 89-ac. tract in A. J. Lagrone Sur., 4 miles SE of Winona ..... Location.

VAN ZANDT COUNTY

L. R. Barton's No. 1 Wamble, 300 ft. from S and W of 100-ac. tract in Pleasant Young Sur. ..... Derrick.

Chapman et al's No. 1 Clarke, 150 ft. from N and W of 76-ac. tract, John Walling Sur. ..... Derrick.

Craft & Kelsey's No. 1 Eusa, John Prade Sur., 150 ft. from E and 71 ft. at right angles to intersection of Sam Allen tract, north farm. ..... Derrick.

Cranfill & Reynolds' No. 1 Alexander, 150 ft. from S and W of 42-ac. tract, J. Burleson Sur., 1 mile S of Grand Saline ..... Drlg. 3,404 ft.

Cranfill & Reynolds' No. 1 Clark, 160 ft. from W and 52½ ft. from N of strip 161½ by 1,100 ft. off N end Clark's 24-ac. tract, J. Walling Sur., SE of discovery ..... Top Austin chalk 2,450 ft.; shut down 2,705 ft. to set csg.

T. Daniels' No. 1 Fannie Cumbine, 185 ft. S and 175 ft. E of NW cor. 156-acre tract John Wright Sur. ..... Drlg. 1,840 ft.

Dennis Oil Co.'s No. 1 C. W. Morris, 100 ft. from N and 300 ft. from E lines of Morris 160-acre tract in C. L. Morris Sur., 5 miles SE of Ben Wheeler. ..... Coring 2,690 ft.

Grand Saline Oil Co.'s No. 1 Carns, 200 ft. from S and W of most westerly SW cor. of 588-acre tract in S.P.R.R. Sur., Abstract 887, 4½ miles N of Grand Saline ..... S. D. 1,100 ft.

Hartt Oil Co.'s No. 1 Dr. L. M. Cox in A. C. Night Sur. 1,785 ft. N of S line and 524 ft. E of W line ..... Derrick.

Howard & Dooley's No. 1 Elliott 188-ac. tract in W. H. Bundy Sur. ..... Derrick.

Imperator Oil Co.'s No. 1 Canter, 150 ft. from N and W of Carter 171-ac. tract, W. M. Daniels Sur., NE of Van Pool ..... Derrick.

Pandem Oil Co.'s No. 1 Brinn & Gibbard in Ramon Sunigas Sur., NE of Grand Saline ..... Pecan Gap 2,850-2,975 ft.; S. D. 3,045 ft.

Priest et al's No. 1 Blewett, 175 ft. NW and SW of SE cor. of NW 84-ac. tract, E. Porter Sur. ..... Derrick.

Short et al's No. 1 B. C. Andrews, 330 ft. N and 160 ft. E of NE cor. of J. P. Farley 60-acre tract in Margaret Neil Sur. ..... S. D. 3,005 ft.

Texas Chief Oil Co.'s No. 1 Foster, 600 ft. E of W line and 600 ft. N of S line of W. P. Foster's 151-acre tract in F. Montgomery Sur., 7 miles south of Canton. ..... **Spudded and shut down.**

Pure Oil Co.'s No. 1 Clarke, S offset to Cranfill & Reynolds' No. 1 Clarke ..... Location.

Pure-Humble's No. 1 L. V. Freeman, 250 ft. from E and 712 ft. from N line of 31.5-acre tract in John Walling Sur., one-half mile E of discovery. ..... Plugged back; trying to produce.

Shell Pet. Corp.'s No. 2 Fowler, Lease 302, 250 ft. N of S and 200 ft. E of W lines of Fowler 35.35-ac. tract ..... Drlg. 295 ft.

Van Zandt Oil & Dev. Co.'s No. 1 Robinson, located NE cor. of Y'Barbo Sur., 4 miles E of Grand Saline. .... Drlg. 3,675 ft.

Pure Oil Co.'s No. 3 Jarman, 657 ft. from S and 250 ft. from W of 134-ac. tract ..... T. D. 2,900 ft.; set lines.

Pure Oil Co.'s No. 1 Leanard, 777 ft. from S and 200 ft. from W of 47.5-ac. tract ..... Derrick.

Judge A. W. Walker's No. 1 S. H. Keahey, 150 ft E, 150 ft. from S of Keahey's 139-ac. tract, Robert Giles Sur. ..... Derrick.

WOOD COUNTY

Big Indian Oil Co.'s No. 1 R. J. King, 450 ft. W of E line and 150 ft. N of S line of King's 109-acre tract in Wm. Barnhill Sur. ..... Drlg. chalk 2,775 ft.; top Pecan Gap 2,635 ft.; top Navarro 1,585 ft.

Pace et al's No. 1 Dickey, 1,200 ft. from E and 300 ft. from S of Dickey 120-ac. tract, J. O. Clark Sur. ..... Top Navarro 1,825 ft.; S. D. 2,061 ft.

CONFERENCE ON GAUGE STANDARDS IS CALLED

A general conference of manufacturers and users of pressure and vacuum gauges has been called by the American Standards Association to determine whether these interests favor the establishment of a national standard for such gauges. The conference held in the Engineering Societies Building, 29 West Thirty-ninth Street, New York City, at 10:30 a.m. (daylight saving time) on Thursday, May 15, follows a request of the American Society of Mechanical Engineers for a representative meeting at which interested groups might express their attitude toward the proposed work.

The establishment of an authoritative standard for pressure gauges is considered of particular importance because of the hazards to life and property involved in the accuracy of a gauge. One of the most serious hazards which the committee would attempt to eliminate is the possibility of the gauges indicating zero pressure when there is actually sufficient pressure to constitute a serious hazard if a boiler or tank is opened. Among the interests to which pressure and vacuum gauges are of great importance are oil and compressed gas and power plants. Almost every important industry uses pressure gauges either in manufacture or in its product.

If the conference approves the establishment of a standard under A.S.A. auspices, a technical committee, including official representatives of producers, users and independent technical bodies, will be organized to formulate the standard. One of the functions of the committeen would be the correlation of a number of specifications for pressure and vacuum gauges which are already in use by governmental and private organizations.

BRITISH PUT EMBARGO ON OIL IN GUIANA

WASHINGTON, D. C., May 12.—American citizens interested in promoting oil companies with backing of American capital in British Guiana have had their attention called to a circular issued by the Department of Lands and Mines to those who applied for licenses to explore for mineral oil suggesting they could either withdraw their applications and receive their refund of the fees deposited or leave these applications on record for the time being with the understanding that they do not establish any preferential claim to consideration. They have been informed that the whole matter of exploration for oil in British Guiana is under consideration by the British government and that meanwhile no exploration licenses can be granted or renewed.

It is understood the reason for the imposition of this oil embargo, which is regarded as a restriction to the entry of American capital in oil promotion in Guiana, is that the government desires no new oil fields opened up and wishes to conserve all such properties for Imperial defense. Surprise is expressed over this action in view of the fact that there is no certainty that oil exists in commercial quantities in British Guiana. No exploration work of any account has ever been undertaken. Promoting companies would have to spend large sums on what is characterized by those who have studied this situation very recently as a pure gamble.

GULF P. L. REPORT

The Gulf Pipe Line Co. of Oklahoma's report for April shows crude runs 1,677,187.52 bbls.; shipments 2,057,325.07 bbls.; stocks April 30, 8,406,306.12 bbls.

OKLAHOMA FIELDS

(Continued from Page 50)

plugged back after finding water in the Wilcox sand at 7,716-20 feet. The test was shut down and will probably be abandoned.

The other wildcat tests north of the producing area in the Oklahoma City Pool were coring. Prairie Oil & Gas Co. and Tom Slick Oil Co.'s No. 1 Dills, C SE NW, Section 17-13-3w, Oklahoma County, was coring at 4,650 feet with nothing showing. Cromwell-Franklin Oil Co.'s No. 2 Thompson, SW cor. NW, Section 15-12-3w, north of the state capitol, was coring at 4,187 feet.

The wildcat test of the J. F. Cuniff and others' No. 1 St. Joseph's Orphanage, NE cor. SW SE, Section 17-12-4w, Oklahoma County, west of Bethany, cored to 5,937 feet in sandy shale with nothing showing. The test was preparing to land 9-inch casing at 5,950 feet, the total depth.

The total operations in the South Oklahoma Field increased the last part of the week when 20 new locations were announced on May 9, bringing the total field operations to 525, including the completed wells. The completions fail to keep pace with the new locations.

Indian Territory Illuminating Oil Co.'s No. 2 Salsman, SW cor. NW, Section 32-11-2w, was bailed in the last day of the week and extended the production in the one location southeast. The first hour's production was 189 bbls. and the second hour's was 198 bbls. and the third 190 bbls. The gas was estimated at 30,000,000 feet. The first 18 hours' gauge was 3,001 bbls. The total depth of the well was 6,506 feet. It is the producing well in Section 32-11-2w.

The Mid-Kansas Oil & Gas Co. announced its plans to abandon the semi-wildcat test in the Nicoma Park district, east of the Oklahoma City area. The test is No. 1 C. A. Trosper, SE cor. NE SE, Section 24-12-2w, Oklahoma County, west of the discovery well in the area. The total depth of the test was 7,375 feet. The discovery well, No. 1 D. B. Trosper, NE cor. NW, Section 19-12-2w, made 207 bbls. on the gauge of May 8.

The Chandler Area

In the west Chandler area Magnolia Petroleum Co. has put its No. 2 Decker, SW cor. SE, Section 8-14-4, Lincoln County, back on production. The well was dead the previous week, and after cleaning out and swabbing it started flowing. The first 10 hours' gauge was 1,610 bbls. and it was averaging 125 bbls. an hour on the last report. The well was making an average of 250 bbls. before going dead.

The pipe line shipments from the new area west of Chandler during the month of April were 110,000 bbls. which is a new peak for that area. The Magnolia Petroleum Co.'s No. 2 Benedict, NE cor. SE NW, Section 7-14-4, Lincoln County, made 55,000 bbls. of the total shipments. The same well has averaged 3,300 bbls. a day from Simpson sand horizon during the last three weeks. Activity in the area has increased, Magnolia Petroleum Co. has nine operations under way and the Prairie Oil & Gas Co. and Tom Slick Oil Co. have four joint operations.

New Wells in Beebe Pool

The Beebe area in Pontotoc County is being revived by new wells. Four producers completed together with new operations. The four producers were swabbing and flowing, while one test was a failure. Benedum & Trees Oil Co.'s No. 2 Malloy, NE cor. SE SE, Section 30-5-5, was swabbing 40 bbls. a day from a total depth of 2,630 feet. Same operators' No. 8 Mole, NW cor. NE, Section 31-5-5, was producing from a total depth of 2,646 feet, where it was swabbing 250 bbls. a day. Dixie Oil Co.'s No. 3 Haynes, NW cor. NE SW, Section 32-5-5, was flowing 75 bbls. daily from a total depth of 2,498 feet. Same operators' No. 2 Roper, in Section 32-5-5, had Simpson sand at 2,640-54 feet, and was swabbing 50 bbls. a day. Prairie Oil & Gas Co.'s No. 1 Norris, SW cor., Section 6-4-8, Pontotoc County, was a failure at 2,034 feet and has been abandoned.

Developments in Caddo

In southern Oklahoma the Cement area in Caddo County continues to set the pace. A deeper drilling campaign is in progress, with the 3,300-foot horizon the objective. English Drilling Co.'s No. 5 Gaffney, SE cor. NW SE Section 31-6-9w, Caddo County, was shot at 3,350-55 feet and swabbed 15 bbls. a day. Same operators' No. 7 Abernathy, NE cor. SE Section 31-6-9w, was shut down at 3,386 feet. Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co.'s No. 1 Rowe, SW cor. NW NE Section 36-6-10w, Caddo County, a recent completion, was making 1,300 bbls. a day from a total depth of 3,316 feet. Same operators' No. 2 Gregory, SE cor. NE SW Section 31-6-9w, cored a dry sand at 3,926-42 feet, and was drilling deeper. No. 4 Jones, SW cor. SE Section 31-6-9w, was drilling ahead at 3,554 feet. Magnolia Petroleum Co.'s No. 4 Gregory, SE cor. NW SW Section 31-6-9w, was drilling at 2,600 feet. Same operators' No. 7 Rowe, in Section 36-6-10w, which was recently completed, gauged 1,600 bbls. May 9.

Harper Test 8,575 Feet Deep

In the northwestern part of the State the deep wildcat tests were still drilling deeper, with the Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Section 14-26-24w, Harper County, the deepest test ever drilled in Oklahoma. The test was drilling at 8,575 feet, on the last report, and was still in the Mississippi lime. It had drilled 1,600 feet of this formation and it is believed to be the thickest section of Mississippi lime ever drilled in any well in the State.

The Peerless Oil & Gas Co.'s No. 1 Crowell, C NW NE Section 23-28-16w, Woods County, was drilling at 5,877 feet. This test is believed to have had the thinnest section of Mississippi lime yet found in any of the wildcat tests now drilling in the northwestern part of the State.

Oklahoma City's Shut-in Production

The initial shut in production in the Oklahoma City Pool, that has been allowed to produce for 24 hours or less as of May 9 was 380,052 bbls. The initial production of the wells and the approximate dates each will be opened for its regular producing period follows:

Company, lease—	Well No.	Bbls.	Date
I. T. I. O.:			
Watters	*3	2,204	.....
Jones	*4	[1]1,954	5-18-30
Butterfield	*1	[2]3,264	5-17-30
Pasadena-Heights	*1	[3]5,982	5-16-30
Jones Community	*1	[4]4,944	5-12-30
Jones	*4	[1]1,594	5-18-30
Fortson-Farley	3	[5]15,272	5-20-30
N. Emerson	*3	[2]2,204	5-19-30
E. Fortson	2	[2]3,364	5-19-30
L. Farley	1	[6]19,833	5-21-30
A. Bodine	7	[4]609	5-23-30
Wilke-Anderson	*1	381	6- 1-30
Sudik	*1	[7]20,000	.....
Unsell-Krager	*3	[4]4,804	6- 9-30
M. Fuzzell	2	[8]1,673	6- 9-30
M. Sudik	*2	[1]11,939	6-14-30
M. Unsell	*1	[3]3,199	6-12-30
L. Jones	*6	[5]5,092	6-17-30
Ferndale	*1	[4]4,933	6-19-30
M. Knox	*1	[4]4,052	6-17-30
Warner-Farley	*2	[4]960	6-20-30
W. Canfield	*2	[9]166	6-20-30
Jones	*5	5,200	6-29-30
Warden	*1	6,758	7- 1-30
Werner-Farley	*3	[2]2,096	7- 2-30
Werner-Speegle	*3	[2]2,355	7- 2-30
H. W. Jones	*1	[3]3,129	7- 4-30
Borden	*1	[2]2,080	7- 5-30
E. Farley	*1	[4]104	7- 5-30
Salsman	*2	[3]3,001	7- 8-30
C. Brokaw	*4	[8]435	7- 6-30
Ferndale Comm.	*2	[4]4,142	7- 7-30
W. Franklin:			
Lowery	*6	[6]6,339	5-19-30
Lowery	*7	[1]11,335	5-11-30
Thelmer	*1	[7]7,896	5-17-30
Eacock	*1	[6]6,838	6- 1-30
Lowery	*5	[5]5,599	6-13-30
Hoopes	*4	6,396	6-12-30
Cromwell:			
Trosper Park	*10	[9]9,015	5-21-30
Trosper Park	*18	[3]1,902	7- 7-30
Sinclair:			
Vincl	*2	[3]3,310	5-14-30
Vincl	*1	14,005	5-17-30
School land 54	*2	45,235	5-21-30
Vincl	*4	[2]2,385	7- 5-30
Sinclair et al:			
Kinter	*3	[4]505	5-12-30
Kinter	*4	[5]5,000	5-19-30
Kinter	*5	255	5-28-30
Kinter	*7	[10]630	5-29-30
Vincl	*4	[8]2,385	2- 5-30
Coline:			
Olds	*5	[1]3,467	5-16-30
Warren	4	[1]11,622	5-13-30
Warren	7	[1]15,000	6- 1-30
Clauer	*2	5,130	5-23-30
Olds	*9	[6]1,169	6- 7-30
Olds	*7	[7]819	6- 8-30
Warren	*3	[6]6,914	6-30-30
Slick:			
Hoopes	*1	[1]1,064	5-17-30
Hoopes	*2	[6]6,758	5-2[illegible]-30
Hoopes	*5	[4]815	7- 6-30
Hoopes	*6	[1]1,617	7- 8-30
Shell:			
Petty	*2	[12]260	5-13-30
Heenan & Coe:			
Cunningham	*1	[3]6,904	5-30-30
Skelly:			
Hoopes	*3	[4]322	6- 4-30
L. Jones	*3	[5]5,092	6-14-30
Dunn	*1	19,580	6-28-30
Hoopes	*2	[4]1,846	6-30-30
Hoopes	*5	[10]2,514	7- 1-30
Hoopes	*7	[2]1,954	7- 1-30
Hoopes	*4	[10]4,976	7- 2-30
Hoopes	*6	[5]441	7- 7-30
Mid-Kansas:			
Mollman	*2	2,492	6- 5-30
Mollman	*3	[1]1,726	7- 3-30
Tom Slick Oil Co.:			
Bailey	*1	16,758	6-27-30
Company, lease—	Well No.	Bbls.	Date
Houghton	*1	[2]8,873	6-27-30
Hall & Briscoe:			
Lindsey	*1	[5]5,186	7- 2-30
Total	74	380,052	

*Wells producing from the Simpson sand. All others are producing from the Arbuckle lime.

[1]Estimated. [2]Thirteen hours. [3]Three and one-quarter hours. [4]Twelve hours. [5]Five hours. [6]Eighteen hours. [7]Seventeen hours. [8]Twenty hours. [9]Twenty-one hours. [10]Nineteen hours. [11]Twenty-two hours. [12]Eight and one-half hours. [13]One and one-quarter hours. [14]Six and one-third hours. [15]Eighteen and one-quarter hours. [16]Sixteen hours. [17]Three hours. [18]Thirty-five minutes. [19]Fourteen and one-quarter hours. [20]Nine and three-quarters hours. [21]Six hours.

These notations indicate the number of hours the wells produced on their initial production test.

Actual Field Production

The actual production of the Oklahoma City Field is given in the table below, which shows the dates, number of barrels production, number of wells producing and total number of completed oil wells in the field on the various days:

Day—	Bbls.	Wells Prod.	Total Comp. wells
May 6	104,216	45	218
May 7	110,305	45	219
May 8	119,834	47	220
May 9	76,353	39	222
May 10	105,005	50	224
May 11	129,917	51	224
May 12	89,028	45	224

Oklahoma City Shipments

The daily average pipe line and tank car shipments from the Oklahoma City Field averaged 105,629 bbls. for the week ending May 5. The total shipments for the same seven days by companies were as follows:

Company—	Bbls.
Empire	105,050
I.T.I.O.	72,420
Magnolia	89,660
Oklahoma	105,665
Prairie	166,284
Shell	15,210
Sinclair	129,685
Tidal	64,495
Total	739,567

Greater Seminole Production

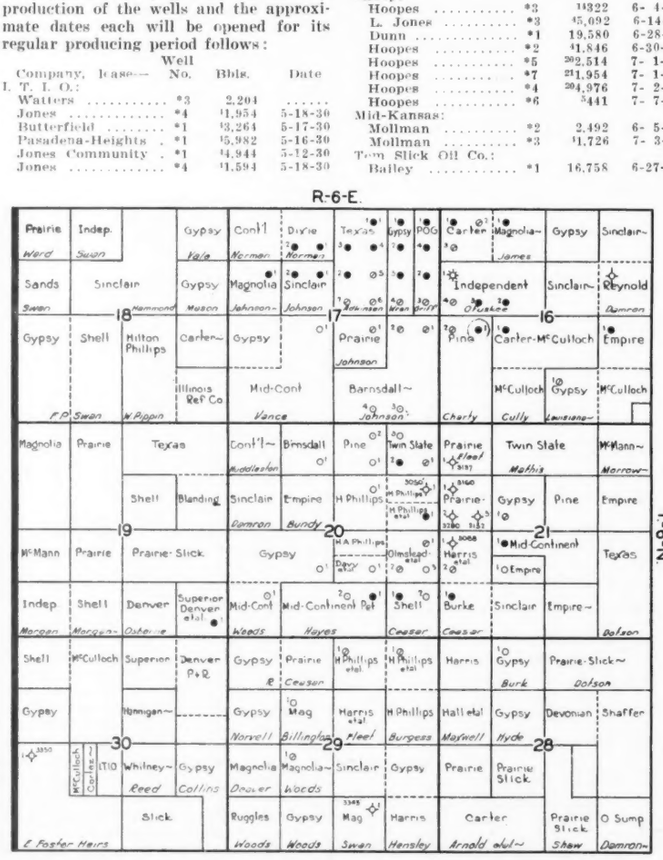
Another decline was registered in the production from Greater Seminole area for the week ending May 5. The Seminole area averaged 195,270 bbls. from 1,851 wells. The daily average gauges for the Greater Seminole area for the same seven days were as follows:

Pool—	Wells	Bbls.
Little River	365	33,995
East Little River	70	18,415
Carr City	57	9,217
Maud	137	4,549
Mission	104	11,060
Bowlegs	282	16,928
Earlsboro	300	33,693
East Earlsboro	150	35,867
Seminole	266	18,412
East Seminole	33	3,715
Searight	87	9,418
Allen	257	17,962
Asher	26	1,972
Konawa	47	8,335
St. Louis	484	36,666
Sasakwa	53	10,483
Total	2,718	270,686

Seminole Oil Shipments

Oil shipments from the Seminole area for the seven days ending May 5, including the pipe line and tank cars, averaged 204,945 bbls. daily. The shipments exceed production by approximately 9,000 bbls. daily. The daily average shipments by companies were as follows:

Company—	Bbls.
Barnsdall	2,554
Champlin	2,545
Continental	586
Consolidated	266
Cosden	6,062
Deep Rock	4,382
Empire	1,695
Gulf	25,273
Magnolia	13,424
Oklahoma	20,876
Prairie	20,923
Producers & Refiners	2,387
Pure	5,164
Shell	11,473
Sinclair	51,326
Texas	11,802
Tidal	15,715
White Oak	1,785
Total	196,736
Tank cars	8,210
Grand total	204,945



The above plat shows the latest developments in the Konawa Pool in Seminole County, Oklahoma. The discovery well was drilled in Section 8-6-6, north of the area shown here, but that part of the field soon played out and development spread to the south. The well in the large circle in Section 16, was the first large producer in the pool. Its initial flow was estimated at 1,000 bbls. an hour. The other large gushers were found in Sections 20, 21 and 29-6-6. The wells produce from the 2,900-foot horizon.

Caddo County

Simms Petroleum Co. and J. R. Wrightsman made location for No. 1 Johnson, C SE NW, Section 24-6-11w. English Drilling Co. has made location

for No. 1 Perry, SW cor. SE SW NE, Section 31-6-9w. Magnolia Petroleum Co.'s No. 7 Caddo-Rowe, NW cor. SW NE, Section 36-6-10w, has been deepened from 3,276 feet to 3,295 feet and production increased from 600 bbls. to 1,952 bbls.

Carter County

Magnolia Petroleum Co.'s No. 3 Gill, SE cor. SW NE, Section 23-1s-3w, has been completed for 35 bbls. in sands 2,312-2,520 feet. Gilmer Oil Co.'s No. 2 Hernstadt, NE cor. NW NE, Section 26-1s-3w, is making 8 bbls. from broken sands 2,449-2,697 feet.

Cleveland County

Continental Oil Co. has the cellar dug for No. 5 Sudik, SW cor. NW NE, Section 6-10-2w. No. 6 Sudik is a cellar, NW cor. SW NE, Section 6-10-2k, Oklahoma City Field.

Cotton County

Jacobs & Aring'on's No. 1 McCloud, NE cor. SW, Section 14-2s-11w, is rigging up.

Creek County

Bert Swift and others' No. 1-A Primer, NW cor. SE, Section 4-19-9, is rigging up. Johnson Oil Refining Co. and others made location for No. 1 Tiger, SE cor. NW, Section 20-19-9. Phillips Petroleum Co. and Gled Oil Co. staked location for No. 1 Carter, NW cor. SE, Section 20-19-9. Location has been made for No. 7 Koch, SW cor. NE, Section 20-19-9. Ed. Jilson and H. Steen's No. 1 Self, SE cor. NW, Section 31-17-10, is a rig. Atlantic Oil Producing Co.'s No. 1 J. Bear, SE cor. NE NW, Section 16-14-10, is cleaning out to deepen from 3,239 feet. O. M. Irelan and others' No. 1 Bible, NE cor. SW, Section 20-19-9, has been completed for 182 bbls. in sand 2,237-55 feet, total depth 2,295 feet. Phillips Petroleum Co. and Gled Oil Co.'s No. 6 Koch, SW cor. SE NE, Section 20-19-9, made 125 bbls. in sand 2,190-32 feet. Holmes & Burton's No. 1 Davis, SW cor. SE SE, Section 19-19-10, made a 75-bbl. well in sand 2,174-2-211 feet. Pure Oil Co.'s No. 1 Roberts, SW cor., Section 30-17-9, has been abandoned at 3,567 feet.

Garfield County

Continental Oil Co. and others' No. 1 Brown, NE cor. NW SW, Section 10-20-4, was completed for 909 bbls. in Wilcox sand at 5,970 feet.

Jefferson County

Sutherland Oil Co.'s No. 1 Riverbed, NW cor. NE NE, Section 10-7s-5w, has been completed for 60 bbls. in sand 1,084-1,102 feet.

Kay County

Carter Oil Co.'s No. 1 Jamison, NE cor., Section 17-27-1w, was completed for 75 bbls. in sand 3,612-18 feet.

Muskogee County

Western D. & E. Co.'s No. 3 Fields, NW cor. NE NE SW, Section 9-15-18. J. R. Graves and others' No. 6 Flowers, CWL SE NW, Section 5-13-16, is rigging up. Bement Oil Co. has a machine on the ground for No. 2 C. London, NW cor., Section 20-13-16. Mack Drilling Co.'s No. 1 McDaniel, SW cor. NW SE, Section 33-16-15, is dry and abandoned at 1,420 feet. Babcock Brothers' No. 7 Barnett, C SW NE, Section 8-15-15, made 128 bbls. in sand 1,585-90 feet. The Francis Corp.'s No. 2 A Manuel, NE cor. SE SE, Section 18-15-17, has been abandoned at 1,417 feet. A. T. Kreps and others' No. 1 M. Brown, NE cor. SW SE, Section 8-15-18, is a dry hole at 1,080 feet. D. L. T. Co. and others 'No. 4 L. Mackey, NW cor. SE SW, Section 9-15-18, has been abandoned at 1,095 feet. Hale & Reynolds' No. 1 M. Sango, CSL N half SW NW, Section 9-15-18, has been completed for 10 bbls. in sand 741-53 feet. H. L. Jolly's No. 6 T. Carline, NW cor. SW, Section 9-15-18, made 250 bbls. from sand 833-56 feet. Kimsey & Simpson's No. 1 Mackey, SW cor. SE SE SW, Section 9-15-18, is dry and abandoned at 1,145 feet. William La Pierre's No. 2 Durant, SE cor. NE NE, Section 10-15-18, is a dry hole at 1,656 feet. J. E. Swindler's No. 1 W. Rentie, CWL SW SW, Section 10-15-18, has been abandoned at 1,020 feet. E. J. Metzger and others' No. 1 townsite, block 365, SW cor. SE, Section 26-15-18, has been abandoned at 1,157 feet. R. Swift and others' No. 1 Harris, NW cor. SE NW NW, Section 14-15-18, is dry and abandoned at 1,115 feet. E. B. George's No. 2 F. Caesar, SW cor., Section 33-14-16, has been completed for 50 bbls. in sand 1,607-26 feet. S. E. Kelly, trustee's No. 2 M. Minter, SW cor. NE, Section 30-14-18, is a dry hole at 1,601 feet.

Pittsburg County

Midwestern Oil & Gas Co.'s No. 1 Trekell, NW cor., Section 14-7-18, has been completed for 18,000,000 feet of gas in sand 1,859-2,015 feet.

Wagoner County

Mechling & Hosey's No. 4 D. Drew, SW cor. NW NW SW, Section 30-18-15, is drilling at 500 feet. W. B. Pine's No. 1 M. Childers, SW cor. NE SW, Section 23-18-16, is drilling at 553 feet. E. J. Benedict and others' No. 7 M. Kelly, SW cor. NW NE, Section 6-17-15, is drilling at 300 feet. I. V. Horner's No. 3 C. Ross, SE cor. NE, Section 29-18-18, has been abandoned at 741 feet.

Kiowa County

W. C. Adams' No. 1 Fisher, NE cor. SW, Section 34-7-17w, is drilling at 350 feet. Parker and others' No. 6 Fuqua, SW cor. NE, Section 18-6-16w, is pumping 10 bbls. from sand 441-55 feet.

Lincoln County

Thurman & Deaner and others made location for No. 1 Stufflebeam, NE cor. SW, Section 28-17-2. Tom Slick Oil Co.'s No. 1 Grof, NW cor. SE, Section 13-14-3, is rigging up. Atlantic Oil Producing Co. made location for No. 1 Ryan, SE cor. NW, Section 5-14-6.

Logan County

The Prairie Oil & Gas Co. made location for No. 1 Elrod, NE cor. SW SW, Section 31-19-4w.

Marshall County

Goddard Oil Co. moved a machine in for No. 5 McComas, SE cor. SW SW SW, Section 13-5s-5, Madill Field. Magnolia Petroleum Co. has a machine on the ground for No. 2 West Rutland Co., SE cor. NW SE SE, Section 30-5s-6. Jordan and others' No. 1 Pen Mutual, NE cor. NW SE, Section 17-5s-5, is dry and abandoned at 704 feet. F. W. Merrick's No. 17 Null, SE cor. NW NW, Section 24-5s-5, has been completed for 94 bbls. in sands 540-615 feet. Bilbo Oil Trust Co.'s No. 1 Heath, SW cor. NE NE, Section 25-5s-5, has been abandoned at 766 feet. Magnolia Petroleum Co.'s No. 2 Coatsworth, NW cor. SE SE SE, Section 35-5s-6, is making 65 bbls. from lime 581-84 feet.

Oklahoma County

Mid-Kansas Oil & Gas Co. made location for No. 1 Messer, SW cor., Section 32-14-3w, Oklahoma City Pool. Tom Slick Oil Co. and others' No. 1 Atkinson, CWL NW, Section 1-11-3w, is a cellar. The cellar has been dug also for No. 2 Atkinson, SW cor. NW NW, Section 1-11-3w. Indian Territory Illuminating Oil Co. made location for No. 3 H. W. Jones, SW cor. SE SW, Section 1-11-3w. Location has been staked for No. 4 Jones Community, SE cor. SW SW, Section 1-11-3w. J. S. Cosden's No. 1 McKehen, NW cor. SW NW, Section 2-11-3w, is a rig shut down. Taylor-Gwinn made location for No. 1 Stout, NW cor. SE NW, Section 2-11-3w. Tom Slick Oil Co. and others' No. 1 Dennruether, SW cor. SE SE NW, Section 2-11-3w, is a cellar. No. 2 Dennruether, SE cor. NW, Section 2-11-3w, is also a cellar. Skelly Oil Co. and others' cellar is dug for No. 1 Dillon, NE cor. SW, Section 2-11-3w. Phillips Petroleum Co. made location for No. 1 Smoot, NE cor. NW NE, Section 3-11-3w. Tom Slick Oil Co. made location for No. 1 Campbell, NE cor. SE NE, Section 3-11-3w. Wirt Franklin Petroleum Corp. made location for No. 9 Lowery, NW cor. NE NW, Section 12-11-3w. No. 10 Lowery is a location, NE cor. NW NW, Section 12-11-3w. Tom Slick Oil Co. has the cellar dug for No. 2 Page, NE cor. NW, Section 14-11-3w. Sinclair Oil & Gas Co. made location for No. 1 Donnell, SE cor. NE NW, Section 23-11-3w. Indian Territory Illuminating Oil Co. made location for No. 3 W. Anderson, SW cor. SE NE, Section 25-11-3w. Indian Territory Illuminating Oil Co. made location for No. 5 Watters, SE cor. SW NE, Section 25-11-3w. No. 6 Watters is a location, NW cor. SW NE, Section 25-11-3w. Coline Oil Co. has the cellar dug for No. 13 Clauer, NE cor. NW SE, Section 25-11-3w. Location for No. 14 Clauer has been made, NW cor. NE SE, Section 25-11-3w. No. 15 Clauer is a location, SW cor. NE SE, Section 25-11-3w. Indian Territory Illuminating Oil Co. made location for No. 5 School land, NW cor. NE NW, Section 36-11-3w. No. 6 School land is a location, SW cor. NE NW, Section 36-11-3w. The cellar has been dug for No. 6 Salasman, NE cor. SW NW, Section 32-11-2w. Phillips Petroleum Co., the Prairie Oil & Gas Co. and T. B. Slick's No. 3 Sigmon, SE cor. NW SW, Section 32-11-2w, is a rig moving in. The rig is also being moved in for No. 6 Sigmon, NE cor. SW SW, Section 32-11-2w. No. 7 Sigmon, NE cor. NW SW, Section 32-11-2w, is also a rig moving in. Indian Territory Illuminating Oil Co.'s No. 1 H. W. Jones, NW cor. SE SW, Section 1-11-3w, has been completed for 13,129 bbls. in 12 hours, sand 6,388-6,505 feet. Mid-Kansas Oil & Gas Co.'s No. 3 Mollman, SE cor. NW SE, Section 23-11-3w, made 1,726 bbls. in 12 hours from sand 6,353-6,431 feet. No. 1 Warden, NW cor. SW, Section 24-11-3w, flowed 5,768 bbls. from sand 6,320-6,603 feet. No. 3 Speegle, SE cor. SW SW, Section 24-11-3w, made 2,355 bbls. in 12 hours from sand 6,285-6,560 feet. Shell Petroleum Corp.'s No. 3 Petty, NE cor, Section 30-11-2w, topped Arbuckle line 6,155 feet, drilled to 6,462 feet and made 1,116 bbls. Skelly Oil Co.'s No. 2 Hoopes, SW cor, NW NE, Section 31-11-2w, has been completed for 4,059 bbls. in sand 6,433-6,531 feet. No. 4 Hoopes, SE cor. NW NE, Section 31-11-2w, made 9,414 bbls. from sand 6,403-6,508 feet.

Osage County

Peters and others moved rig in for No. 13, SW cor. NW NE NW, Section 17-27-6. Empire Oil & Refining Co. moved a machine in for No. 2, SW cor. NW SW, Section 23-27-11. Peters and others made location for No. 6 C W half E half NW, Section 27-27-11. Peter Adamson Jr. is moving a machine in for No. 3, NW cor. Section 5-21-9. Lewis Production Co. made location for No. 1, NW cor. SE SE NW, Section 34-20-10. Peters Petroleum Corp.'s No. 5, CSL N half SW, Section 32-24-9, has been completed for 30 bbls. in sand 1,586-1,607 feet. Midco Oil Corp.'s No. 19, NW cor. SW NE SE, Section 18-22-10, made 300 bbls in Burgess sand 1,877-99 feet.

Okfuskee County

Transcontinental Oil Co.'s No. 1 Lasley, SW cor. NW, Section 25-10-10, is drilling deeper at 3,253 feet. Location has been made for No. 1 Tiger, SE cor. NE NE, Section 26-10-10. The Prairie Oil & Gas Co. is digging the cellar for No. 1 Andrews, SE cor, Section 5-13-10. No. 1 M. Davis, NW cor., Section 9-13-10, is a cellar. Superior Oil Corp.'s No. 1 Palmer, NW cor. SE, Section 23-12-11, has been abandoned at 3,641 feet. Burk-Greis Oil Co.'s No. 1 L. Buck, SW cor. NE, Section 36-11-9, has been completed for 20,000,000 feet of gas in sand 3,120-28 feet.

Okmulgee County

J. F. Egan's No. 1 K. Fox, NW cor. SW SW NE, Section 22-16-13, is dry and abandoned at 2,118 feet. J. L. Selby's No. 34 A. Anderson, NW cor. NE NW, Section 35-14-14, is drilling at 1,000 feet. Bryan Petroleum Co.'s No. 1 J. Sells, NE cor. SW NW, Section 10-15-14, is dry and abandoned at 1,685 feet.

Pawnee County

John Byrnes' No. 7 Edmiston, NW cor. SE NW, Section 30-21-9, is spudding. Geraldine Oil Co.'s No. 6 Edmiston, CSL NW SW, Section 30-21-9, is spudding. P. J. Breslyn and others' No. 2 Cotton-CNL SW NW NE, Section 6-20-8, is drilling at 150 feet. Martin and others moved a machine in for No. 7 Cotton, CWL NE SW, Section 6-20-8. John Byrnes' No. 6 Edmiston, NE cor. SW NW, Section 30-21-9, has been completed for 30 bbls. in Layton sand 1,090-1,120 feet. Cy Marshall and others' No. 7 Lucas, NE cor. NW SW, Section 6-20-8, has been completed for 100 bbls. in Tucker sand 2,703-06 feet. Thompson & Black's No. 2 Mote, NW cor. SW, Section 14-20-9, is dry and abandoned at 2,630 feet.

Payne County

The Prairie Oil & Gas Co. and others' rig is up for No. 1 Rosa Finnell, C SE SW, Section 5-19-1w, Orlando district. No. 1 George Rule, C NW NE, Section 8-19-1w, is rigging up. Minnehoma Oil Co. made location for No. 1 Shedd, NE cor. SE NE, Section 7-19-1w. Mulberry Oil Co.'s No. 3 Sharrum, NE cor. NW NW, Section 5-17-4, is rigging up to deepen from 3,179 feet. Reiter-Foster Oil Co. and others' No. 1 Finnell, C NE NW, Section 8-19-1w, has been completed for 760 bbls. in Misener sand 4,830-36 feet. Mulberry Oil Co.'s No. 5 Ballard, SW cor., Section 32-18-4, made 115 bbls. in sand 4,197-4,226 feet. No. 1 Payne, SW cor. NW NE, Section 5-17-4, has been completed for 40 bbls. in sand at 4,270 feet.

Pontotoc County

Dixie Oil Co. has the rig on the ground for No. 2 Roper, SW cor. SE NW, Section 32-5-5. Smith & Lee moved a machine in for No. 4 George Wade, SE cor. NE, Section 3-4-7. B. A. La Salle's No. 1 Malloy, NE cor. SE SE, Section 30-5-5, is dry and abandoned at 2,732 feet. Superior Oil Corp.'s No. 3 Boyd, SW cor. NE NW, Section 32-5-5, made a 97-bbl. well in sand 2,429-90 feet. Dixie Oil Co.'s No. 3 Haynes, NW cor. NE SW, Section 32-5-5, has been completed for 300 bbls. in Simpson sand 2,478-95 feet. The Prairie Oil & Gas Co.'s No. 1 Norris, SW cor., Section 6-4-8, has been abandoned at 2,032 feet.

Pottawatomie County

Empire Oil & Refining Co.'s No. 4 Smith, NW cor. SE NE, Section 8-8-5, made 200 bbls. in Hunton lime 4,013-22 feet. Magnolia Petroleum Co.'s No. 1-A Walker, NE cor. NW NE, Section 21-7-4, St. Louis Field, has been completed for 33 bbls. in sand 3,475-3,515 feet.

Seminole County

Continental Oil Co. moved the rig in for No. 4 Maguire, SW cor. SE SE, Section 24-9-5, Earlsboro Pool. Gypsy Oil Co. has the rig on the ground for No. 2 Miller, SE cor. SW SE, Section 24-9-5. The Prairie Oil & Gas Co. moved the rig in for No. 3 Ground, NW cor. SW NE, Section 23-9-5. Gypsy Oil Co. has the cellar dug for No. 3 C. Cooker, SE cor. NW SW, Section 2-8-5, Mission Pool. Barnsdall Oil Co. made location for No. 3 Factor, SW cor. NW SE, Section 13-7-6, Little River Pool. Independent Oil & Gas Co. has the cellar dug for No. 2 Wood, SE cor. NE NW, Section 13-7-6. Gypsy Oil Co. made location for No. 9 K. Payne, SE cor. NE, Section 5-7-7, East Little River Pool. Mid-Continent Petroleum Corp. has the cellar dug for No. 19 Smith, NE cor. SW NE, Section 5-7-7. Sinclair Oil & Gas Co.'s No. 12 Phillips, NE cor. SE, Section 5-7-7, is a cellar. The Prairie Oil & Gas Co. made location for No. 1 Whittack, SE cor. SW, Section 36-7-7. Magnolia Petroleum Co.'s No. 1 B. Dale, NW cor. SW SW, Section 16-7-8, is rigging up. No. 1 G. Hayes, SW cor. NW, Section 16-7-8, is rigging up. Barnsdall Oil Co. moved the rig in for No. 4 Johnson, SE cor. SW SE, Section 17-6-6, Konawa Pool. Mid-Continent Petroleum Corp. has the rig on the ground for No. 2 P. Harjo, NW cor. SW SE, Section 20-6-6. W. B. Pine has the rig on the ground for No. 2 Cheparney, NE cor. NW NE, Section 20-6-6. Shell Petroleum Corp. has the rig on the ground for No. 2 J. Caesar, NE cor. SE SE, Section 20-6-6. No. 3. J. Caesar, SW cor. SE SE, Section 20-6-6, is a cellar. Burke-Greis Oil Co. made location for No. 2 Caesar, NE cor. SW SW, Section 21-6-6. Gypsy Oil Co.'s cellar has been dug, NW cor. NE NW, Section 28-6-6, for No. 1 Cochran. Barnsdall Oil Co. made location for No. 4 Lusty, NW cor. SW NE, Section 13-5-7.

Gypsy Oil Co.'s No. 1 Carbitcher, SW cor. SE, Section 14-9-5, Earlsboro Field, has been completed for 52 bbls. at 4,241 feet after plugging back from 4,249 feet in Wilcox sand. Magnolia Petroleum Co.'s No. 2 Carbitcher, SE cor. NE SW, Section 14-9-5, made 144 bbls. in Hunton lime 4,130-50 feet after plugging back from 4,185 feet. Mid-Continent Petroleum Corp.'s No. 1 Grounds, NW cor. NE NE, Section 23-9-5, is pumping 10 bbls. from Wilcox sand 4,233-39 feet. Amerada Petroleum Corp.'s No. 1 Lasley, NE cor. NW SW, Section 19-9-6, has been completed for 1,380 bbls. in Wilcox sand 4,098-4,135 feet. Carter Oil Co.'s No. 5 Chowning, SW cor., Section 19-9-6, made 1,055 bbls. from Wilcox sand 4,168-

78 feet. Independent Oil & Gas Co. and Atlantic Oil Producing Co.'s No. 4 L. Fixico, SE cor. SW NW, Section 20-9-6, East Earlsboro Pool, made 520 bbls. from second Wilcox sand 4,256-65 feet. Magnolia Petroleum Co.'s No. 2 Cudjo, NW cor. NE NE, Section 24-7-6, Little River Pool, has been completed for 25 bbls. at 4,155 feet after plugging back from 4,166 feet in Wilcox. Gypsy Oil Co.'s No. 7 Payne, SW cor. SE NE, Section 5-7-7, East Little River Pool, made 1,510 bbls. in Cromwell sand 3,195-3,219 feet. Champlin Oil & Refining Co. and Shell Petroleum Corp.'s No. 6 Sachemeche, SE cor. SW SW, Section 9-6-6, Konawa Pool, made 225 bbls. in Cromwell sand 2,874-2,914 feet. Harris and others' No. 1 Chupco, NE cor. SE, Section 20-6-6, is dry and abandoned at 3,130 feet. Sunray Oil Co.'s No. 1 Mathis, SE cor. NE, Section 12-5-7, has been completed for 38,000,000 feet of gas in sand at 2,700 feet. The Texas Company made location for No. 4 Lewis, NE cor. SE NW, Section 13-5-7.

Stephens County

Ross Suthard has the rig up for No. 1 McKinley, NE cor., Section 25-1-8w. Amerada Petroleum Corp.'s No. 8 Hanson, SE cor. SW SW, Section 12-1s-4w, made 216 bbls. in sand 3,191-3,200 feet. Pace and others' No. 6 Bristowe, NE cor. NW NW SE, Section 18-2s-7w, has been abandoned at 1,872 feet. No. 5 Watkins, NE cor. NW SE, Section 21-2s-7w, is dry and abandoned at 1,776 feet. Pearce & Brown's No. 1 Harley, NW cor., Section 30-2s-6w, has been abandoned at 5,071 feet.

Tulsa County

Johnson Oil Refining Co. and others' No. 1-A, McClain, NW cor. SE SE, Section 7-19-10, is drilling at 1,010 feet.

PIPE COATING TESTS

WASHINGTON, D. C., May 12.—In order that the application of test coatings to the small diameter pipes for the nipple tests may be started as soon as possible, the Bureau of Standards is advising sponsors of coatings for nipple tests in the co-operative investigation of protective coating to arrange for the shipment of their materials at once as the first application of coatings probably will be made on Monday, May 26. The bureau gives notice that all containers should be plainly marked as follows: "To National Tube Co. (Attention: Mr. H. B. Lynch), Galvanizing Plant, Versailles, Penn., A.P.I. Coating Tests." Mr. H. B. Lynch should be notified of the shipments and a copy of the notification should be sent to the Bureau of Standards, Attention: Gordon N. Scott.

Sufficient material should be sent to coat not less than 150 feet of 3½-inch o.d. pipe. This quantity will allow sufficient excess materials, for samples, touching, etc.

ENJOIN USE OF NAME

NEW YORK, May 10.—Another of the new "Standard Oil" units has passed out of the picture with the action of the United States district court at Richmond, Va., in granting a permanent injunction restraining the Standard Oil Co. of Virginia from continuing business operations under the name "Standard Oil."

The injunction was issued on the petition of the Standard Oil Co. of New Jersey. In its bill of complaint, the latter company stated that it would be unlawfully and unfairly deprived of the valuable good will now attached to its corporate name, the result of doing business in Virginia for the past 24 years, if the Virginia company, which was incorporated in September of last year, were permitted to operate.

J. W. SOLLEY DIES

ST. PETERSBURG, Fla., May 10.—John Wilson Solley, 84, pioneer operator in the Pennsylvania and West Virginia oil fields, died at his winter home here. He was born at Tionesta, Pa., and came here from Parkersburg, W. Va., where burial will be made.

TORPEDO MANUFACTURER MASTERS HARD PROBLEM

The drilling of deep wells constantly adds to the problems of the drilling contractor and production superintendent and one of the most recent has been with the shooting of 3½-inch drill stem in a well in Oklahoma City Pool.

This string of drill pipe was frozen in the hole and after every other method of removing it had been tried it was decided to shoot the pipe apart so that the hole could be cleared.

This 3½-inch outside diameter 13.3 pound per foot drill pipe was of the upset type and the inside clearance was only 1⅞ inches diameter, due to the type of connection, so it was a problem to secure shooting equipment that was small enough to pass through the 1⅞-inch opening and still be effective.

The Zero Hour Torpedo Co. of Tulsa was called into consultation on this job and they in turn got into communication by telephone with their Boulder, Colo., factory and found that they could make a suitable Zero Hour bomb for this condition.

This bomb does not depart from the standard type of equipment made by the company in any detail other than its size. It consisted of a brass shell 1½-inch outside diameter, about 40 inches long, fitted with the double watch mechanism and two small size electric batteries. Into the lower part of the case two sticks of dynamite were tamped and below the brass shell were suspended three 1-inch diameter tin shells holding 5 quarts of nitroglycerin, making a total length of 37 feet of shell.

This shot was lowered into the hole to a depth of 6,374 feet by the use of a Halliburton Oil Well Cementing Co. steel measuring line. On the first run in the shell was loaded with sand and it was found that it would not pass all openings inside the pipe so it was turned down one-sixty-fourth of an inch and then lowered satisfactorily.

The timing mechanism is in itself a very interesting part of this bomb, for two small Swiss wrist watches were used that had a total width of three-fourths of an inch and a thickness of less than one-half inch. These watches were set to make contact with the point on the electric wire that closed the circuit at intervals of 15 minutes, so if the first contact did not discharge the dynamite for any reason the second watch would repeat the operation of closing the circuit a quarter of an hour later.

From the results obtained it is evident that the first contact was enough for the nitroglycerin was discharged and the work of the bomb done within the predetermined interval, and it was made evident by the movement of fluid at the top of the hole and the jar felt on the lowering line.

The hole was full of water and the bomb was exploded against a water pressure of about 2,800 pounds per square inch, which gives an idea of the strength of the shell and indicated that it was tight when it reached its position in the hole.

Since this first small bomb was made for the Coline Oil Co. and used in its No. 4 Olds in the Oklahoma City Pool, the Zero Hour Torpedo Co. has made two similar ones that were used in the Sasakwa Field south of the Seminole area to shoot a string of drill pipe at a depth of about 3,400 feet. In this instance the pipe was 6-inch inside diameter, but the 1½-inch diameter bomb had to be used on account of it having to pass through a special steel die nipple with a 2-inch opening through it.

The ability of the Zero Hour Torpedo Co. to design and make special equipment of this kind upon short notice is thought of enough importance to be worthy of note, for with deep drilling and high pressure conditions being encountered in many fields similar conditions may be encountered at any time.

39,000 Bbls. per Day Of High Grade Crude From Two Old Fields

BRADFORD, Pa., May 10.—In the opinion of two eminent figures in the Bradford oil field, the Pennsylvania fields will this year see the greatest development since the boom period of the 1880's when the Bradford Field became the world's first great petroleum development. The two men who offer this opinion are Paul D. Torrey, noted geologist, and William A. Dusenbury, president of the First National Bank of Olean, N. Y.

New capital is being poured into this territory in a drilling program more thorough than anything this region has ever seen. Under the newly developed system of water flooding, lands are being made to produce several times the quantity of oil taken out before their practical abandonment some 20 years ago. Production of crude was approximately 7,500,000 bbls. last year in this field and predictions for 1930 range from 50 to 100 per cent higher.

From the city of Buffalo alone, more than $5,000,000 of new capital has been expended in the field surrounding this city and Olean in the last five years, and large amounts have been invested here by Pittsburgh, Rochester and New York capitalists. The South Penn Oil Co. (Standard), the Associated Producers (Tide Water Associated), Sinclair Refining, Kendall Oil and similar companies are still the largest actual producers but at the present rate of expansion the Forest Oil Corp., controlled by interests identified with the Marine Trust Co. and Niagara Share Corp. of Buffalo, may soon have the largest output in this section.

Despite the fact that many pessimistic persons are of the opinion that the present boom is a bubble apt to burst at any moment, experts declare that the wild speculation of the bonanza days of great oil fields is not to be expected, as present drilling is more systematic and results are easier to predict. Owing to the fact that the entire field has been thoroughly drilled under the old system, its limits and qualities are well known. Of more than 2,000 wells drilled last year in two fields only five were dry.

Under the improved methods of well spacing and water flooding, the large companies are sweeping their acreage with alternate rows of oil and water wells.

"Lands which are now sold at prices ranging from $2,000 to $3,000 an acre could have been purchased on a production basis in 1920 at approximately $250 an acre," Mr. Dusenbury said. "At that time many fields were virtually abandoned, but water flooding methods have increased values.

"At the present time the fields near Olean are producing about 10,000 bbls. a day and the Bradford fields are yielding about 29,000 bbls. Future production will depend somewhat on oil prices which are now $2.75 a barrel with premium. A peak for this year is expected to be reached late in the summer.

Bradford Producers Vote for Curtailment Of Crude Production

BRADFORD, Pa., May 12.—Overproduction of crude oil in the old Braford Field, which has increased its output from 3,500 bbls. a day in 1916 to 29,000 bbls. a day in 1930, was responsible for a public meeting of oil producers in this city today.

The price of crude oil in Pennsylvania has dropped from a high of $4.15 per barrel to $2.50 per barrel in the course of the past year for no other reason than the Bradford and Allegany Fields had increased Pennsylvania grade oil production to more than refiners required, and as another cut in price is probable, with the steadily increasing output, it suddenly struck all the producers in this field at about the same time that immediate action was necessary to correct the situation.

At today's largely attended meeting a resolution was submitted and unanimously adopted that a committee of producers be appointed to study conditions and formulate plans and report at a subsequent meeting of the Northwestern Pennsylvania Oil Producers Association to be held within one week from today.

Representatives of several of the large producing companies pledged their support to any organized plan to curtail production.

A meeting of the New York State producers will be held Thursday in Olean and it is understood that they will take similar action and that the two committees will work together.

NEW NATIONAL OFFICERS FOR A.P.I. COMMITTEES

DALLAS, Tex., May 12.—Appointment of new national officers for the American Petroleum Institute Committee on the Standardiation of Steel Tanks for Oil Storage and Committee on Standardization of Oil Country Tubular Goods has been announced by Carl A. Young, secretary of the institute's Division of Production.

G. O. Wilson of the Standard Oil Co. of California succeeds Ralph J. Reed, Union Oil Co. of California, as national chairman of the Committee on Standardization of Steel Tanks for Oil Storage. Mr. Wilson formerly was national vice chairman. Mark W. Daw, Shell Oil Co., San Francisco, Calif., will continue as national secretary. Mr. Reed has been appointed chairman of the California district subcommittee to succeed Mr. Wilson. Other appointments affecting the district and other subcommittees will be announced shortly.

John R. Suman, Humble Oil & Refining Co., has been appointed national chairman of the Committee on Standardization of Oil Country Tubular Goods, succeeding Charles Fitzgerald, Pure Oil Pipe Line Co. of Texas, Dallas, Tex. Mr. Fitzgerald has been made national vice chairman. Melbert Schwarz, Rio Bravo Oil Co., Houston, Tex., has been appointed national secretary to succeed E. P. Bly, Standard Oil Co. of California.

Other changes in the personnel of various district and other subcommittees will be announced shortly. It is proposed to create two new engineering subcommittees, one on Line Pipe, A.P.I. Standards, No. 5-L, and the other on Casing, Drilling Pipe and Tubing, A.P.I. Standards, No. 5-A.

PETROLEUM FILMS

The Bureau of Mines films pertaining to the petroleum industry are in such demand that oil companies are being approached by bureau officials and urged to make a larger number of films available. During the quarter ending March 31 over 600,000 people have viewed these films. They are in demand by engineering societies, schools and colleges as well as by oil companies. It now requires at least three months' notice to obtain a majority of these films for exhibition use.

BESSEMER

ANOTHER distinct engineering advancement in the new Type-G. A. pumping and drilling engine is the large-diameter crank shaft. It is a die-forging made of high grade heat-treated steel, and is so built that the flow lines of the metal are uncut. Similar shafts have been in severe service on Type-16 engines for several years without a single report of breakage. Even with this and five other value-increasing improvements, the price remains unchanged.

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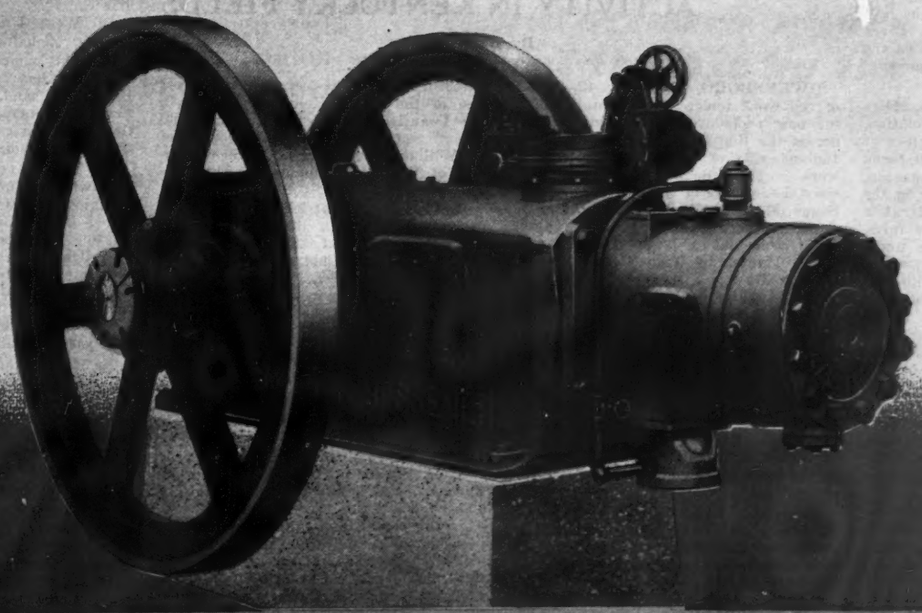

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Average Wells in Southeastern Ohio

Muskingum County Has Best Producer of Week. Licking County Well Next Best. One Completion in West Virginia

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., May 12.—Few good producers were completed during the week. The Southeast Ohio fields had two and West Virginia one, neither much better than the average. In Section 6, Jackson Township, Muskingum County, the Pure Oil Co. completed and shot in the Clinton sand a test on the Holman heirs' farm. It produced 135 bbls. the first 24 hours and flowed 75 bbls. the second 24 hours. In the SW of Section 5, Hopewell Township, the Preston Oil Co. completed a test on the Sina Varner farm. It produced 6 bbls. the first 24 hours after shot. In the NW of Section 6, Licking Township, the Wehrle Co. completed a duster on the E. Wills farm. It was shot in the Cleveland sand but failed to respond.

SOUTHEAST OHIO

In the NE of Section 30, Enoch Township, Noble County, Urban Nau and others have a very light pumper in the Buell Run sand at a second test on the A. H. Hupp farm. In Section 8, Ripley Township, Holmes County, the Ohio Fuel Gas Co. has a Clinton sand duster on the Desbro Campbell farm.

In Section 14, Hanover Township, Licking County, the Hope Construction & Refining Co. has completed and shot in the Clinton sand No. 6 on the Charles O'Bannon farm. It produced 95 bbls. the first 24 hours.

In the SW of Section 19, Harrison Township, Perry County, the Ohio Fuel Gas Co. completed a test on the L. C. Moore farm. It is a gasser good for 2,500,000 feet. In Lot 22, Salem Township, Washington County, W. P. Rice and others completed a test on the John Weppler farm. It is a 5-bbl. pumper in the Macksburg 500-foot sand. In the NW of Section 7, Reading Township, Perry County, the Preston Oil Co.'s test on the W. A. Miller farm is a 10-bbl. pumper.

Meigs County

In the NW of Sutton Township, Meigs County, the Twenty-Five Association, Inc., and others have a 5-bbl. pumper at No. 16 on the William Carnahan farm. In the SW of Section 10, same township, Koontz & Co. completed a duster in the first and second Cow Run sands at a second test on the Arthur Beegle farm. In the SW of Section 11, same township, Delbert Bachelor & Co. completed a second test on the John and Nellie Arnett farm. It is a duster in the Cow Run sand.

In the SE of Section 13, Sutton Township, Meigs County, the Ohio Fuel Gas Co. has started to drill on the B. N. and E. L. Salser farm. In Section 11, Sutton Township, Delbert Bachelor and others have started to drill on the John and Nellie Arnett farm. In the same section and township, the Twenty-Five Association, Inc., has started to drill on the William Carnahan farm.

In the SW of Section 20, Wheeling Township, Guernsey County, the Ralston Oil & Gas Co. completed in the Niagara lime No. 3 on the C. C. Virtue farm. It is a natural producer good for 25 bbls. In the SW of Section 10, Franklin Township, Monroe County, the Preston Oil Co. has a 10-bbl. pumper in the Big Injun sand at a second test on the B. Mallett farm. In the SW of Section 11, same township and county, the Green Oil Co. and others have a light pumper in the Keener sand on the Mason N. Hogue farm.

In Section 13, Hanover Township, Licking County, the Hope Construction & Refining Co. has a 10-bbl. pumper in the Clinton sand at a second test on the A. W. Howell farm. In the NE of Section 3, Harrison Township, Perry County, the Ohio Fuel Gas Co. has a light Clinton sand gasser at No. 3 on the Arthur Porter farm.

At New Mansfield, Section 1, Waterloo Township, Athens County, the Ohio Fuel Gas Co. has a duster in the Clinton sand at a second test on the T. H. Hoover farm. In Section 6, Jackson Township, Muskingum County, the Hope Construction & Refining Co. has a 5-bbl. pumper in the Clinton sand on the Walter Warfle farm.

In Hanover Township, Licking County, the Hope Construction & Refining Co. is drilling a second test on the A. W. Howell farm and has started to drill on the Minor & O'Bannon farm. A. W. Patton & Co. have a rig up on the Albert Cutridge farm in Franklin Township.

In Lots 27 and 35 the Gordon Oil Co. is drilling on the T. B. Shearls and Ralph Huffmans farms. The same company has the rig completed for No. 3 on the same farm. In Oxford Township, Tuscarawas County, the Capitol Drilling Co. has a rig up on the C. H. and M. E. Faulson farm. In Washington Township the Ohio Gas Producing Co. has a rig up on the Stewart Asher farm.

In Section 13, Fallsburg Township, Licking County, the Emerald Petroleum Co. and others have completed and shot in the Clinton sand a test on the Jacob Hankey farm. It produced 95 bbls. the first 24 hours.

In the SE of Section 5, Hopewell Township, Muskingum County, the Hopewell Fuel & Gas Co. completed and shot in the Clinton sand No. 3 on the S. L. Burrier farm. It produced 60 bbls. the first 24 hours.

Noble and Ashland Counties

In Section 18, Elk Township, Noble County, F. O. Parks & Co. have a dry hole in the Maxon sand on the Adam Tewanger farm. In the SW of Section 22, Lake Township, Ashland County, O. C. Smith and others have a 4 or 5-bbl. pumper showing a good pressure in the Berea grit on the W. H. Mosher farm.

In Section 2, Bethel Township, Monroe County, Edward Byers and others have a light pumper in the Big lime on the Kinney heirs' farm. In Clay Township, Muskingum County, Walsmith & Webb have a gasser on the A. E. Early farm. In the same township, D. H. Courtney and others are drilling on the Israel Funderburg farm.

In Newton Township, Muskingum County, the Hydraulic Pressed Brick Co. has spudded in on its own property. In Clay district the Cannon Oil & Gas Co. has a rig up on the Earl Baughman farm. In Section 8, Harrison Township, Perry County, D. H. Courtney & Co. have a rig up on the Israel Henning farm. In Hopewell Township the Midland Oil Co. has a rig up on the Ella H. Denny farm. In Madison Township, Perry County, the Atha Oil Co. has a rig up on the Mellick Brothers' farm.

WEST VIRGINIA

In Smithfield district, Roane County, West Virginia, the United Fuel Gas Co. has a gasser in the Big Injun sand at No. 4,218 on the W. L. Deverick farm. In Reedy district, the Reedy Oil & Gas Co. has a duster in the Berea grit on the C. A. O'Hara farm.

In Scott district, Boone County, E. R. Caremon's second test on the W. L. Stone farm is a gasser in the Berea grit. In Curry district, Putnam County, the Penn Natural Gas Co. has a gasser in the same formation at a second test on the J. M. Chaney farm.

In Grant district, Cabell County, the same company's test on the S. I. McGinnis farm is a gasser in the same formation. In Liberty district, Marshall County, the Manufacturers Light & Heat Co. has a gasser in the Big Injun sand at No. 3,411 on the V. B. Pyles farm. In the same district, the Denver Oil & Gas Co. has drilled deeper old No. 2 on the Mary Moore farm. It is a light gasser. In Mannington district, Marion County, Sutton Brothers have a gasser in the Big Injun sand on the L. S. Thomas heirs' farm.

On Nettle Run, Burning Springs district, Wirt County, Roberts Brothers completed in the Cow Run sand No. 56 on the Rathbone Oil tract. It is a very light pumper. In Grant district, Ritchie County, the Astron Oil Co. has shot in the Big Injun sand No. 14 on the Herman Strusberger farm. It swabbed 8 bbls. the first 24 hours and will probably be drilled to the Berea grit.

In Jefferson district, Pleasants County, Martin Kelley completed two tests on the L. Cornell farm, good for 1 and 10 bbls., respectively. On Wetzel Run of Paw Paw Creek, Paw Paw district, Marion County, the Owens Illinois Glass Co. completed a second test on the Edgar Fox farm. It is a gasser in the Fourth sand.

Fair Producer in Ritchie County

In Grant district, Ritchie County, West Virginia, Edwin D. S. Lynch has a fair producer at No. 14 on the Cornelia Storrs farm. It produced 40 bbls. the first 24 hours after drilled into the Squaw sand. In Harris district, Wood County, the Heck Oil Co.'s test on the W. W. Smith farm is dry and abandoned.

In West Union district, Doddridge County, Zickafoose & Swadley have a very light pumper on the John Batton farm. It has been drilled through the Big Injun sand. In Sheridan district, Calhoun county, the Conservation Oil & Gas Co. has a gasser in the same formation on the James Kerby farm.

On Elk River, Big Sandy district, Kanawha County, West Virginia, the Buffalo Creek Oil & Gas Co. has completed in the Big Injun sand a second test on the Rebecca J. Young farm. It is a light gasser, 300 feet northeast of the first test on this farm. In Liberty district, Marshall County, the Manufacturers Light & Heat Co. has completed No. 3,400 on George McCusk farm. It is a gasser in the Big Injun sand.

In Mannington district, Marion County, the Clifton Oil Co. has completed a light gasser on the H. L. Campbell heirs' farm. In Sheridan district, Calhoun County, the Richter Oil Co.'s No. 4 on the Elmer P. Haught farm is a 10-bbl. pumper in the Salt sand.

Calhoun County

On Yellow Creek, Center district, Calhoun County, C. S. Morris and others completed in the Big Injun sand a test on the Nicholas heirs' farm. It is a light gasser, 2,000 feet southwest of the test on the Mary Whipkey farm. On the left fork of Nut River, Jefferson district, Lincoln County, Pridemore & Adkins have a 3-bbl. pumper in the Berea grit on the Albert Sanson farm. The location is 5 miles southwest of the South Penn Oil Co.'s test on the J. M. Egnor farm.

In Clay district, Wirt County, W. C.

(Continued on Page 166)

SEARCH FOR NEW POOLS IS CHIEF ACTIVITY IN KENTUCKY FIELDS

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., May 12.—Much of the work under way is on the hunt for new pools over a wide area. Just across the line from Owensboro, on the Indiana side of the Ohio River, more work is being done than at any time since the opening of the Owensboro Field. Some of the well known operators in the Owensboro Field are making plans for testing out a large territory near Terre Haute, in Vigo County, where many years ago a well was drilled that attracted widespread attention. Among them are James C. Ellis and Thomas and others. Ellis and Thomas have done a large amount of drilling over the Owensboro Field.

Ohio County

The best completion in the Owensboro Field is Hupp, Duff and others' test on the F. H. Noel farm, near Maxwell, in Ohio County, in the southeast corner of the lease and credited with an initial of 100 bbls.

Swarthout, Rhodes and others brought in a nice gas well, 200 feet from the south line and 1,000 feet from the east line of the Grace Brooks farm, 6 miles southeast of Whitesville.

James C. Ellis and others' second well on the Hill-Rhodes farm, in the Bell's Run area of Ohio County, northwest of the old Ambrose-Weller Pool, which started the drilling activity over the county, produced an initial of 80 bbls. Same parties found a nice gas well on the Earnest Wade farm, near Mangan.

Penn-Indiana Oil Co. found a 20-bbl. pumper in No. 14, 2,500 feet from the north line and 600 feet from the west line of the C. A. Kelley 260 acres in the Deanfield area. S. B. Berry and others' test in the northeast corner of the William Coleman farm, 4 miles southeast of Whitesville, pumped 7 bbls. initial.

Rudolph & Kirkpatrick's No. 14, 2,000 feet from the north line and 500 feet from the west line of the C. H. Greer 187 acres in the Deanfield area, pumped 24 bbls. initial. Fred L. Weir and others' No. 14, 1,200 feet from the south line and 800 feet from the west line of the Norris heirs farm, Deanfield area, pumped 20 bbls. initial. Huff & Stinson Brothers' test on the Freeman Sparks farm, in the Buford Pool, in western Ohio County, developed into a duster. James C. Ellis and others drilled a dry hole in a second test on the Charles McKinley, in the Bell's Run area.

S. M. Sirman's No. 25 on the Nancy Farmer 87½ acres, in the Friendship Church Pool, produced 20 bbls. initial. This has been a remarkably fine producing shallow sand lease. Doctor Sirman drilled a dry hole on the Alton Evans farm at 750 feet. Chester Oil Co.'s No. 1 on the R. J. Brandon farm, was drilled to the Barlow sand and pumped 5 bbls. in 24 hours.

In the same county, James C. Ellis and others are drilling on the A. G. Wright farm, and a second test on the Perry Talley farm. Wade and Moore are drilling No. 1 Ed Bickett farm. Rudolph & Kirkpatrick are working at No.

(Continued on Page 102)

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Active Wildcatting in Central West

More Leasing Reported Than for Many Years. Oil and Gas Chief Topics in Districts Visited on Tour of Fields

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, May 12.—Not for many years has there been such activity in the leasing of wildcat territory in all areas of the Central West Field. This was learned in a three-day automobile trip through southern Michigan, northern Indiana and along the western border of the Hoosier State, in fact in most any part of Indiana at this time. Oil and gas are the talk in every small and large town in all of the areas visited, the trip covering several hundred miles.

The first reall well visited was a wildcat drilled by Blair & Miller on the Charles Stuttman farm, NE NW Section 32, Porter Township, Cass County, Michigan. This farm is about 1 mile north of the Michigan-Indiana line and approximately 14 miles north of Elkhart, Ind. The first venture on this farm was drilled to 1,135 feet, where a fishing job resulted and the hole was lost. In this hole a showing of oil was found from 720 to 800 feet, and it would probably have made a small producer had it been plugged to the 800-foot level and given a shot. The drilling outfit was moved to a second location on the same farm and a well was started, which at from 702-04 feet in the Upper Traverse formation produced 25 bbls. initial and is good for from 10 to 15 bbls. The drilling outfit was then moved about 1,000 feet south of No. 2 on the same farm, and indications are a pool has been found, but whether it will cover any large area remains to be seen. Two former tests made in this county were dry. One was the Berring Petroleum Co. on the Frantz farm, SE SE Section 3, Howard Township, and the other was drilled by C. A. Daniels on the Charles Clute farm, NE NW Section 2, Porter Township, which went to around 2,000 feet to test out the Dundee formation but failed to find any production.

On Indiana Side

The Stuttman farm is not far from the town of Adamsville, right along the division line between Michigan and Indiana, and since the well was completed considerable leasing has been done on the Indiana side north of Elkhart. Still farther west is another well being drilled by W. E. Eldridge on the Watteran farm, SE SE Section 10, Berrien County, near the town of New Buffalo, in the extreme southwestern point of Michigan and west of Three Oaks, directly north of Laporte and northeast of Michigan City, near Lake Michigan. A well is also reported drilling on the Caldwell farm, NE SW Section 32, Adams Township, Kalamazoo County, by Norris & Smith, Pittsburgh operators. Another test is under way in the western part of Branch County, near the town of Bronson.

North of Cass County, Gibson-Johnson and the Dixie Oil Co. is drilling on the John Kroeke, SE NW Section 23, Geneva Township, Van Buren County. This test struck salt water in the Traverse formation at 1,078 feet and at last report was down to the Dundee formation at 1,782 feet. A nice looking structure exists in Branch County, not far removed from Coldwater, the county seat, and has been known for years. Back in the nineties there was talk of doing development work in that area, but at that time the old Lima and Indiana Fields were at their height and no ventures were made in the Coldwater area.

In the old Indiana Field there were no new developments found, although there are still thousands of acres of good-looking stuff yet to be tested out and it is these areas that are now getting the bulk of the leasing and if reports are of any value a lot of work will be done. The western and central portions are being leased with large blocks being rounded up from the Michigan State line to the Ohio River.

Around Medarysville

The old producing area around Medarysville and Francisville was visited. This is the field in which the English Syndicate, about 35 years or so ago, drilled so many holes, something like 1,300, but they were all shallow, running from 60 feet down to 1,000 feet. These shallow wells were never plugged and for many years the only noticeable thing about the field was the farmers climbing the fences and dipping the oil from the 4-inch casing and putting it in their automobile engine and taking it to their homes and using it in traction engines, as a lubricant. The M. Van Natta farm, Sections 33 and 34, Gilman Township, Jasper County, Indiana, contained around 525 acres, and a well was drilled on nearly every acre of it. These wells have been neglected and nothing has been done with them until recently, as a former party who was chemist for the old English company, after more than 35 years, secured permission to test the wells and some dozen or more have been put on jacks, and it is reported that about 60 bbls. a day is being taken from the few wells connected up. The oil is hauled to a small village on the Monon railroad, where a small plant has been erected to put the oil in shape for market, and brings a nice income. It was on this big lease that the English concern had a power plant large enough to handle the great number of wells on the property, but nothing but the chimney remains, although there is much pipe underground over the lease, some of which is being utilized by the parties that now have the lease. But little information could be gleaned from those working on the lease. The Mich-Ohio Oil Co. is down around 300 feet on the Brenneman farm in Monon Township, White County, and only a few miles south of Francisville. Leasers are working south toward the Ohio River in many of the counties bordering the western part of the State of Indiana, in Montgomery, Fountain, Vigo, Putnam, Parke, Vermillion, Clay, Owen, Greene, Sullivan, Knox, Martin, Daviess, then through the Princeton Field comprising Gibson, Pike, Dubois, Warrick, in Spencer, Perry and other counties along the north side of the Ohio River.

LIMA FIELD

Only a few completions are reported from the old Lima Field of northwestern Ohio as heavy rains keep the ground soft. Moving on leases has been almost out of the question. Much new work is being planned in various parts of the big field where there are still hundreds and thousands of locations still undrilled, although small wells are all that can be expected.

The important well of the week was by the Kemrow Co. on the O. J. Crawford, Section 15, Cessna Township, Hardin County, northwest of Kenton, where a gas well with a volume of 300,000 feet was found in the Trenton from 1,290-1,440 feet. In this area there is a large gas area, and while as to volume of gas they are small compared with other fields they are well worth going after. The Ohio Fuel Gas Co. has secured blocks of acreage in the Hardin, Wyandot and Seneca County area for future development. Geiger Oil Co. is about due to bring in a test on the Grant Geiger farm, Section 13, Cessna Township, Hardin County.

A. B. Ernst and others' second test in the northeast corner of the Ben Heiler, SE Section 15, Cynthian Township, Shelby County, south of Lima, produced 5 bbls. initially from the Trenton lime from 1,291-1,329 feet, or 38 feet in the lime.

J. H. Murphy & Son's test in the northeast corner of the S. Wolfe, on the oil map as the J. Doran farm, NW Section 1, Hopewell Township, Seneca County, was dry at a total depth of 1,605 feet, or 125 feet in the Trenton. In Jackson Township, same county, Shoemaker and others' test in the southwest corner of the A. Ash farm, SW Section 36, was dry at 175 feet in the Trenton, at a total depth of 1,550 feet.

Kelley Brothers are starting a test on the Earl D. Brown, Section 19, Perry Township, Allen County. Columbus Oil & Gas Co. is drilling a test on the Harvey Wonder, 2½ miles north of Carey, in Wyandot County.

CENTRAL OHIO

Twenty-two completions were reported from the Central Ohio Field, but 4 being oil producers with a combined initial production of 99 bbls, 11 dry holes and 7 gas wells, while in new work starting there were 15 locations made and 35 wells starting, a total of 50, indicating that operations will continue in a rapid rate in the field for both oil and gas.

In Ashland County, Perry Township, Crownshield and others' No. 5 Martie Wheeler, Section 28, pumped 10 bbls. initial from 728-44 feet, which is the Berea sand. Ohio Fuel Gas Co. staked a location on the Charles Swineford, Section 6. Same company brought in a nice gas well in No. 2-5,047 Lola B. Smith, Section 1, Montgomery Township, and the Kemrow Co. is drilling on the Willard S. Wiley, same section. In Lake Township, Smith and others have a fair gas showing on the Henry Mosher, Section 22, from 574-609 feet, and Robinson and others are drilling No. 2 Barbara Early, Section 9, Meltzer and others are drilling No. 3 George W. Black, Section 34, Mohican Township. Ohio Fuel Gas Co. has an average gas well in No. 1-3,-296 Juliette McConnell, Section 12, Orange Township, and same company made a location on the Wade Welch, same section. Robinson and others have a dry hole in No. 4 James Culler farm, Section 25, Mifflin Township, from 577-82 feet. Ohio Fuel Gas Co. is drilling No. 1-5,901 D. R. Harlan, Section 20, Vermillion Township. Same company is drilling No. 1-5,110 M. W. Connell, Section 6, Jackson Township, also No. 1-5,-089 C. H. Eichelberger farm, Sections 3 and 4, Greene Township.

In Lorain County, Carlisle Township, Ohio Fuel Gas Co. is drilling No. 4-5,122 Julia A. Clark farm, Sections 13 and 18, and J. W. Cushing is drilling on the Ellen Burgert farm, Lot 41, Ridgeville Township. M. and S. Burtner are drilling No. 8 V. A. Vanemark, Lot 27, same township.

Wayne County

In Wayne County, Wooster Township, Bryan and others are drilling No. 2 Henry Hixon, Section 16. Hulse & Kundtz are drilling on the Ed Landis, Section 19, Chester Township, same county.

In Holmes County, Hardy Township, the Kemrow Co. has a dry hole in No. 3 Louisa Conn, Lot 14. Slight showing of oil was found from 3,361-74 feet, and dry sand from 3,400-18 feet. Lydic Oil & Gas Co.'s No. 8 A. R. Mackey, Lot 6, Monroe Township, was dry from 712-18 feet. Ohio Fuel Gas Co. has a dry hole in No. 1-5,019 Debora Campbell farm, Section 8, Ripley Township. Same company made a location on the A. H. Campbell, Section 12, Washington Township, and on the Valentine Miller, Section 20, Richland County.

In Cuyahoga County, Ohio Fuel Gas Co. is drilling No. 1-5,134 Charles W. Root, Fractional Section 3, Olmstead Township, in the Cleveland Field.

In Richland County, Butler Township, the Kemrow Co.'s test on the Clara Weidler, Section 29, is a dry hole.

In Knox County, Brown Township, East Ohio Gas Co. has a nice gas well on the Walter Workman, Lot 37, and the Ohio Fuel Gas Co. has one of the same kind in No. 1-154 William Meyers, Lot 38. F. A. Brendall and others are drilling on the Cyrus Miller, Section 13, Jefferson Township.

In Summitt County, Coventry Township, Kime and others have a fair gas well on the Charles Shaw heirs, Section 4, from 3,895-3,902 feet, total depth 3,-962 feet. East Ohio Gas Co. is drilling No. 1 William Sorrick, Section 24, Franklin Township.

In Licking County, Perry Township, the Whitehill Oil Co.'s No. 14 A. A. Ashcraft, Section 9, is dry in the Berea sand from 675-80 feet. Emerald Petroleum Co. is drilling No. 4 Earl Rine, Section 12, Fallsburg Township, and made a location on the William Babcock, Section 13. Wittmer Properties, trustee, is drilling a second test on the Amos Van Winkle, same section.

Muskingum County

Considerable new work is springing up in various parts of Muskingum County. Ohio Fuel Gas Co.'s No. 1-5,039 Sina Varmer, Section 5, Hopewell Township, is reported good for 4 bbls. from 3,087 to 3,128 feet. Preston Oil Co. is drilling No. 1-1,407 W. O. Burrier, Section 5, same township. In Washington Township, same county, the Wittmer Properties, trustee, is drilling on the Jennie L. Robinson in the fourth quarter section, and also made a location for No. 2 Thomas J. Chaplin, same area. Palmer & Geisinger made a location on the Huber Slack farm, same area. In Clay Township, Kachelmacher estate is drilling No. 3 Elk Coal land, Section 3, and Bell & School are drilling on the Ellis N. Funderberg, same section. In Perry Township, Ohio Fuel Gas Co. is drilling No. 1-5,060 W. L. McCurdy, Section 2, and the Atha company is drilling No. 2 L. M. Bryan, Section 20. In Harrison Township, H. C. Farmer is starting a wildcat on the Ira L. Shurtz, Section 20. Wehrle Gas Co. drilled a dry hole on the George E. Wells, Section 7, Licking Township, from 3,265 to 3,319 feet, and the Hope Construction & Refining Co. is drilling on the Nancy Taylor, Section 2. In Union Township the Wehrle Co. is drilling on the John McCloud heirs, Sections 6-15, and in Newton Township the Hydraulic Pressed Brick Co. is drilling on its fee property, Section 34.

In Athens County, Ames Township, Ohio Fuel Gas Co. is drilling No. 6-5,124 J. E. Gifford, Sections 2 and 3, and also made a location on the C. W. Green, Section 2. Same company is drilling No. 1-5,071 J. L. Jeffers in fractional Section 19, Lodi Township. Same company is drilling No. 2-5,137 Alexander Justice, Section 4, Carthage Township. Wittmer Properties, trustee, made a location on the Hocking Fire Clay property, Section 23, York Township. Coolville Gas Co. drilled a dry hole on the State of Ohio land, Section 29, Troy Township, at 1,185 feet.

In Meigs County, Sutton Township,

(Continued on Page 102)

Created by the cracking process

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1930

"What we know we want, we find," runs a maxim of modern scientists.

When the oil cracking process called for valves and fittings to control high pressures and temperatures, Crane scientists developed materials to hold them. When ever more exacting demands for efficiency in cracking sent pressures and temperatures mounting up and up, metals stronger and stronger were developed.

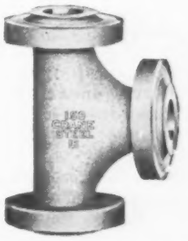
When it was found that valve metals tire and lose strength in long time use under high temperatures, Crane laboratories charted this "creep," so that safety limits could be predicted over periods of years.

Now, the 150 Series Crane valves and fittings here illustrated embody all the experience gained. They have been developed to nullify the effect of creep and all other service strains. Their alloy cast steel has a tensile strength of 110,000 pounds to the square inch. Bonnet studs are chrome nickel steel, with cold-pressed case-hardened hexagon nuts. Disc seating and bonnet bushing are durable exelloy. Seat rings are exelloy, with finished slots for removal. All parts are made to assure perfect fit and absolute dependability, and to comply with specifications and dimensions of the American standards.

But let us send one of the Crane specialists in valve engineering, stationed at strategic points throughout the country, to tell you about these and other Crane cast and forged steel, ferrosteel, brass, and iron valves. These men will co-operate with oil and gas engineers to plan economical and dependable valve equipment for any pressures, temperatures, and services.

Series 150, Cast Steel Cross

Series 150, 90-degree Cast Steel Elbow



Series 150, Cast Steel Tee

CRANE

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Branches and Sales Offices in One Hundred and Ninety Cities

MEN KNOWN IN OILDOM

Frank Pickell

Frank Pickell, general superintendent of production for the McMan Oil & Gas Company, is one of those production officials who believe in supervising production activities right out on the job. While Tulsa is his home and headquarters, Mr. Pickell spends practically all of his time in the field in close contact with operations. He is as much at home at the company's division quarters in Oklahoma and Texas as in Tulsa.

Mr. Pickell was born on a farm in Allen County, Kansas, February 17, 1888. His father engaged in the oil business in Kansas and Illinois and the son fairly grew up in the industry. At 16 he was running a gas engine for the Phoenix Oil Company and from that time until he joined the McMan Oil Company in 1914, he worked in Kansas, Oklahoma, Texas, Illinois and Pennsylvania, taking time out, however, to complete his education in Kansas University.

He made his first alignment with the McMan Oil & Gas Company as a roustabout in the Cushing Field. Shortly after he was promoted to farm boss and later to district foreman of the Shamrock district until the McMan properties were sold in 1917, when he lined up with R. A. Josey. Of 22 months he was in service during the war, 18 were spent overseas. He received a commission in light artillery service and was assigned to the French Balloon Corps as an observer.

The day after his discharge he again joined the McMan company and was sent to Desdemona, Tex., as district superintendent in charge of production. Early in 1920 he was promoted to his present position as general superintendent.

Mr. Pickell was married to Miss Esther Moore on February 3, 1920, at Greenville, Tex.

PERSONAL PARAGRAPHS

A. O. Olson, president of the Noble-Olson Drilling Company of Tulsa, recently visited Calgary by airplane.

* * *

Richard Carroll, New York, formerly an operator in the Eastern Fields, is calling on old Pittsburgh, Pa., friends.

* * *

Lawrence Oliver is returning to Petrolia, Ontario, from Venezuela where he has been drilling for several years.

* * *

Shep. Miers, of the Kerotest Manufacturing Company, Pittsburgh, Pa., has been visiting the Mid-Continent area.

L. W. Rowsey, manager of the Smith Separator Company, Tulsa, has been visiting West Texas.

* * *

W. G. von Gemmingen, consulting engineer, has opened offices in New York.

* * *

Knox L. Garvin, of Duncan, Okla., after June 1, will devote his time to the Dunbar Oil Company, of which he is president.

* * *

S. A. Grogan, chief geologist for the Mexican Gulf Oil Company at Tampico, Mexico, recently visited in San Antonio, Tex.

* * *

Don Bigman, representative of the Universal Oil Products Company, Chicago, Ill., has been spending a short time in Houston, Tex., on business.

* * *

C. B. de Bruyn, deputy manager of Astra Romana, has been appointed manager for Central Europe of the Royal Dutch and Shell interests.

* * *

Arthur L. Hawkins, geologist for the past eight years with Transcontinental Oil Company, has resigned and opened an office in Denver, Colo.

* * *

Travis Peyton, of the land department of the Pure Oil Company, and Miss Sue Adkins, of Fort Worth, Tex., spent their honeymoon in San Antonio.

* * *

D. S. Setnan has been re-elected secretary of the Wellington Oil Company of California with offices in Los Angeles.

* * *

Dewey Chamberlain, of the sales division of the Pure Oil Company, Tulsa, has been making a business trip through Texas.

* * *

J. L. Kennedy, of Cisco, Tex., an old-time operator, has been spending some time in the San Antonio, Tex., territory where he is now interested.

* * *

P. W. Wilhelm, general manager of the mechanical goods department of the Goodyear Rubber Company, Akron, Ohio, visited the Southwest trade areas recently, traveling by plane.

* * *

R. W. Howe, vice president and general manager, Atlantic Oil Producing Company, of Dallas, Tex., was in Shreveport, La., on business with Louisiana representatives of the company.

* * *

W. B. Huroy, chief geologist of the Sinclair Consolidated Oil Company, stopped over in Fort Worth on his way to Venezuela, South America. Mr. Huroy's headquarters are in New York.

* * *

J. R. Munce, vice president of the Arkansas Natural Gas Corporation, and Mrs. Munce have returned to Shreveport, La., from an extended vacation part of which was spent in Hawaii.

* * *

W. C. Connely, superintendent of the land department of the Pure Oil Company, has been granted an indefinite leave of absence. J. G. Wakefield is temporarily serving in this capacity.

* * *

H. B. Simcot, assistant production superintendent of the Continental Oil Company, and G. C. Clark and W. E. Haggard, of the same company, Tulsa, spent a few days in Fort Worth, Tex.

* * *

Guy Sweney, of the Sweney Gasoline & Oil Company, of Peoria, Ill., paid a visit to Chicago on his return from a winter spent at his winter home in Florida. He was accompanied by Mrs. Sweney.

* * *

W. L. Botkin, O. D. Parks, S. P. Turpin, J. L. Young, F. B. Kivirk, and C. J. Shannon, who have been in Venezuela for the Venezuela Gulf Oil Corporation, have returned to the United States.

* * *

G. Harrison Smith, of Toronto, Ontario, vice president of Imperial Oil, Ltd., and president of International Petroleum Company, has been elected to the directorate of the Royal Bank of Canada.

* * *

Don Wallace, safety director for the Mid-Continent Oil and Gas Association, of Tulsa, and H. M. Blakeslee, field representative of the National Safety Council, of Chicago, were in Shreveport, La., in connection with safety work of the Louisiana-Arkansas chapter of the council.

Mark McPeek, who has for several years been manager of the Pyote, Tex., branch of the Parkersburg Rig & Reel Company, has been transferred to its new branch at Hobbs, N. Mex.

* * *

Page Golsan, formerly vice president and general manager of the Great Western Portland Cement Company, has been appointed business manager for Ford, Bacon & Davis, petroleum and pipe line engineers.

* * *

H. E. Wydell, vice president of Arthur G. McKee & Company, Cleveland, Ohio; A. C. Atwater, engineer; J. D. Williams, special auditor, and M. W. Walton, sales manager, spent a week in Houston, Tex., on a business inspection.

* * *

Mr. and Mrs. Carl Weiner and Carl Weiner II, of Chanute, Kans., sailed on the Berengaria, May 14 for a tour of continental Europe, returning early in September. Mr. Weiner is one of the pioneers at repressuring in the old Chanute Field.

* * *

V. E. Ashford, of the Parkersburg Rig & Reel Company, who was formerly located at Seguin, Tex., has been transferred to San Antonio, Tex., where the company has opened district offices to handle the business of Southwest Texas.

* * *

James Hunter, of the Dixie Oil Company scouting department with headquarters in Oklahoma City, Okla., has resigned and returned to Shreveport, La., where he scouted for the company before the general offices were moved to Tulsa.

* * *

Floyd Kiser has been transferred to the Calgary, Alberta, Canada, district by the Parkersburg Rig & Reel Company, from Casper, Wyo. Mr. Kiser will act as field man for the Parkersburg organization which is represented in Canada by supply companies.

* * *

Jack C. Ballagh, secretary of Patterson-Ballagh Corporation, is touring the Mid-Continent and Gulf Coastal fields, making the trip from California in his car. He will spend three or four weeks visiting the various fields. He is accompanied by Mrs. Ballagh.

* * *

Dr. E. H. Sellards, associate director of the Bureau of Economic Geology of the University of Texas, Austin, Tex., will be the speaker at the next meeting of the West Texas Geological Society in San Angelo. Doctor Sellard's subject will be "Pre-Cretaceous Rocks Along the Balcones in Southeastern Texas and in Terrell and Val Verde Counties."

* * *

L. F. Baash, president of the Baash-Ross Tool Company of Los Angeles, Calif., left last week on a trip that will take him to the major fields in Texas, Oklahoma, Kansas, Michigan, Canada, Montana and Wyoming, before he returns to Los Angeles in July. He will be accompanied by H. H. Clark, vice president and sales manager, through Michigan, Canada, Wyoming and Montana.

* * *

Many oil men have already taken to the air in motor powered planes, but several of the fraternity in San Angelo have started gliding. P. R. Yewell, independent operator and consulting geologist, Al Jennings, independent operator; R. P. Robinson, scout for the Skelly Oil Company; J. M. Giles, geologist for the McMan Oil & Gas Company; John S. Moore, consulting geologist; R. L. and Joe Cannon, independent operators; Wilson Keyes, consulting geologist; and several others have formed a glider club and purchased a machine for training purposes.

* * *

The Shell Petroleum Corporation, having moved its Coleman, Tex., office to San Angelo, Tex., H. M. Imholz, who has been district geologist in charge of the Coleman office, will be added to the geological staff at San Angelo. F. E. Logan, who has been handling the land work and in charge of the scouts at Coleman, will remain at Coleman. James Davis will continue as scout at Abilene, and J. F. Halber, scout, will be stationed at Junction or San Angelo. L. H. Parker, instrument man, and Miss Adelle Edgerton, stenographer at Coleman, have been transferred to the San Antonio office.

Natural Gas Developments

TO USE GAS TO LIFT WATER FOR IRRIGATION

LOS ANGELES, Calif., May 10.—The Kings County board of supervisors has received formal petition of A. F. Nunes, president of the Felix Oil Co., and Dana Hogan, representing the Petroleum Securities Co. (E. L. Doheny, president), asking for a 50-year franchise to lay pipe lines in Kings County with which to convey natural gas from Kettleman Hills to rural communities, supplying farmers with gas for pressure to be used in lifting water from their irrigation wells and for domestic use. The plan, which engineers have pronounced feasible, is expected to effect for the farmers considerable reduction in the cost of operating pumping plants. The board fixed May 22 as the date for opening bids for the franchise.

Proposed construction of a pipe line from the Felix property in Kettleman Hills to Fresno and Kings Counties to provide ranchers with natural gas at a low rate for use in pumping water from irrigation wells and for domestic purposes, was announced in February by A. F. Nunes, president of the Felix Oil Co.

Mr. Nunes' announcement followed the State's move to curtail oil production on fee land in the Kettleman Hills Field by means of an injunction suit, naming among others, the Felix Oil Co. as a defendant.

"Since the State objects to the wasting of dry gas, said Mr. Nunes, "we will put it to work. The Kettleman Hills Field is so vast that there is little probability gas from the present Felix well or any of the company's future wells will have to be wasted."

He said this method of pumping has been in operation on a somewhat smaller scale in various sections of the country for some time and to his knowledge had proved efficient.

E. L. Doheny, head of the Petroleum Securities Co., which holds the lease on the property on which the Felix gusher in the Kettleman Hills Field is located, was quoted as being enthusiastic over the proposal to utilize the surplus natural gas to create pressure with which to operate water wells for irrigation in the agricultural area of this part of the San Joaquin Valley.

The plan provided for piping the high pressure gas, as it comes from the well, through a system of pipe lines and service to farmers who would pipe the gas to the bottom of their water wells to lift the water, thus eliminating, it is said, the cost of pumping.

Prior to the Nunes-Doheny announcements, Claude Friend, who has extensive holdings adjacent to Kettleman Hills, experimented with the gas lift on his own ranch near Kettleman City, using natural gas from his Dudley Ridge well, in Section 12-23-19. The gas is forced into the water well through a pipe and it raises the water to the surface as readily as does the natural pressure in artesian wells.

After using the gas for lifting the water it may be trapped for fuel either for domestic use, or piped away for industrial use, for the generation of electric power, for sale to gas public utility companies or for any purpose for which it might have been used before it lifted the water. Mr. Friend feels that this double use of the gas should preclude any attempts by the State to prohibit the use of the gas for lifting upon the ground advanced recently by one of the gas companies that such use is waste because of the small amount of the energy in the gas alleged to be utilized in water lifting.

Probably the first use to be made of the gas lift, except as it is being used on the Friend ranch, will be on the A. R. Goodfellow 7,000-acre ranch 2 miles north of Kettleman City. This ranch has two irrigation wells which have been pumped for years by electric power.

P.G.&E. PRESIDENT OPTIMISTIC ON OUTLOOK

Contracts calling for an annual revenue of about $1,000,000 from natural gas have been made by the Pacific Gas and Electric Co. since it entered that field, A. F. Hockenbeamer, president, says in his report. Mr. Hockenbeamer expressed the belief that a great volume of house heating now being done with other forms of fuel would be by natural gas later and that a considerable and immediate outlook for natural gas would be found among industries that had used other forms of fuel.

"A number of communities and industries within reach of the company's new pipe lines, but heretofore without gas service, will be furnished with natural gas, thus materially enlarging the territory heretofore served. Its lower cost, which is about half that of manufactured gas on a calorimeter basis, will provide an incentive for existing consumers to use more natural gas," the report said.

"As the industries will require power, as well as heat, the company's electric department will also be benefited. Production costs will be reduced materially. The company will be able to deliver the natural product at customers' meters for considerably less than the manufactured gas."

Gross operating revenue for 1929 was $64,440,588, an increase of about $3,000,000, and net operating revenue, after taxes and depreciation, was $25,715,164. Net income totaled $15,740,485. The consolidated balance sheet for December 31 showed total assets of $445,031,922, comparing with $413,918,079 the year before. Surplus was $20,458,031, against $15,528,324.

REJECTS HELIUM GAS BIDS

WASHINGTON, D. C., May 10.—Government purchase of helium gas from private producers failed of sanction when the house reported the naval appropriations bill. The navy had a contract with the Helium Co., of Louisville, Ky., operating plants at Dexter, Kans., and in Colorado, which was furnishing the navy with the noninflammable gas.

The navy will need about 9,000,000 feet of helium in 1931 for the operation of its lighter-than-air craft. The appropriations committee developed that the Los Angeles, largest government dirigible, sustains a helium loss of about 4,000,000 feet annually.

APPALACHIAN GAS ISSUE

An additional issue of $6,700,000 Appalachian Gas Corp. 6 per cent convertible debentures, Series B, due on May 1, 1945, has been offered at par. The debentures will be convertible at any time after May 1, 1931, into common stock, at the rate of 80 shares for each $1,000 debenture. This financing follows the recent announcement of an expansion plan involving the acquisition of additional properties and investment in additional natural gas companies.

PERRY-OKLAHOMA CITY LINE

The new 20-inch gas line of the Cities Service Gas Co., extending 38 miles from a point 15 miles south of Perry, Okla., to the Oklahoma City oil and gas field, is nearing completion. The estimated completion date is May 18. The line is an extension of the Cities Service Gas Co.'s line of the same diameter extending southward from Dilworth, Okla.

OIL FILM IN GASHOLDER AS CORROSION SOLUTION

In a recent address to the Gas Manager's Association of New South Wales, reported in the London Petroleum Times, Lionel G. Collins, of Alexander Duckham & Co., Ltd., dealt with the solution of one of the chief causes of loss in the gas industry, that of corrosion, attended by one of its sources of origin, absorption of moisture by the gas in the holder. Although paint and patent anticorrosives had been used, the results obtained were not satisfactory, but the results obtained with oil filming were stated by the author to have been remarkable and his firm had carried out research work on the subject over a long period.

Oil filming, as the phrase denoted, was the placing of a film of oil on the water in the holders. In the ascent and descent of the cups or holders the film automatically applied a coating of oil to the plates. That method of application insured a constant coating, thus setting up a shield against any corrosive action. In connection with reabsorption, the presence of the film on the water restrained contact between the gas and the water, but at the same time did not prevent the deposit of any moisture from the gas. Thus, the average moisture content of the gas leaving the holders would be further from saturation point.

The selection of a suitable oil for the purpose was an important matter, and one which had received the closest attention of Alexander Duckham & Co. In their researches they had discovered that several essential features had to be recognized:

1. Freedom from sulphur and inorganic acids.
2. A relatively low freezing point.
3. Sufficiently high vaporizing point to obviate evaporation.
4. Sufficient adherent properties to insure the film remaining continuous when exposed to the weather or submerged in the tank for extended periods.
5. Freedom from the liability to oxidation, which would result in the oil becoming gummy and laden with sludge.
6. Ability to separate rapidly when mixed with water.
7. Freedom from any solvent action on existing paintwork.

In regard to the presence of sulphur and inorganic acids, it was obvious that in the endeavors made to relieve gas of its deleterious matter the use of an oil containing those elements could not tend towards successful results, in as much as they would add to the corrosive action.

An oil possessing a low freezing or congealing point, otherwise, in oil language, "cold test," was necessary. The need for the oil to have a high vaporizing point was to avoid loss through evaporation, particularly during the summer months.

The adherent properties of an oil—its "body" or "viscosity"—were important. In the early stages of oil filming kerosene was utilized, and although to a degree satisfactory, it was realized that its low viscosity prevented adherence to the plates. The second principal objection to that oil was its low vaporizing point.

Liability of an oil oxidizing was a serious matter in connection with filming, in as much as the depreciation of the oil through that cause created a sludge which might wholly or partly destroy the film. It also had the effect of making the oil gummy, which was rather an objectionable feature. The presence of sludge interfered with the rapidity of separation of the oil from the water; in other words the presence of sludge created an emulsion. That action would also take place in the case of the use of a nonneutral oil. The tendency of an oil to exert a solvent effect upon existing paint work would be attributable to faulty refining.

For internal filming, the initial application should produce a film of one-fourth-inch thickness on the water surface, that meant 1 gallon of oil to cover 8 square feet. The quantity required for replenishment was approximately 2 per cent of the original quantity, added every 12 months. Those figures had been taken as an all-around average, based upon actual experience. For external filming, the quantity required was a film of not less than one-eighth inch on the water. A safe estimate was that 1 gallon of oil was required for every 25 square yards of plate to be covered.

In cases where the cups of the upper lifts did not automatically pick up the oil on rising, they had to be separately oiled, and provision made by a syphon for discharging rain water if it displaced the oil and caused an overflow. External filming was a safeguard against corrosion and the effect of atmospheric conditions.

Once oil filming was introduced, painting costs were eliminated. Where any corrosive action had already been set up, the presence of the oil would arrest it, and oil filming was a more economical means of maintaining holders than any other existing method.

GAS FOR LAMPASAS

LAMPASAS, Tex., May 10.—Officials of the Consumers Gas Co. of Brady were in Lampasas conferring with the city council in regard to the construction of a gas line to this city. The city council granted a franchise to this company in March with 60 days option and the gas company offcials were here asking for an extension of the option, which the council granted. The gas company, as an evidence of good faith, gave the city council a cash bond of $1,000, guaranteeing the city of Lampasas natural gas for use by November 1.

The Consumers Gas Co. has headquarters at Brady and is supplying that city and other towns in that section with natural gas from the Brownwood Field. The proposed line now under consideration includes the towns of Mullin, Zephyr, San Saba, Lometa and Lampasas.

EXTENSIONS IN ONTARIO

CHATHAM, Ontario, May 10.—The Union Natural Gas Co. of Chatham has secured franchises and will extend its lines this summer to serve the towns of Thamesville and Bothwell, in northeastern Kent County, and Florence in Lambton County. Extensions will also be made from the present line at Oil City in Lambton County to serve Inwood and Alvinston. The various extensions will be made this summer, to deliver gas by September, and will involve the construction of distributing systems in all the communities served.

VEGREVILLE GAS COMPANY

CHATHAM, Ontario, May 10.—Vegreville Natural Gas Co. has been incorporated under Alberta charter with office at Edmonton, Alberta. The company has a franchise to supply gas to the town of Vegreville, to be developed by testing the Vegreville gas reserve.

S. W. OKLAHOMA EXPANSION

GOTEBO, Okla., May 10.—The State Fuel Supply Co. is constructing 8 miles of gas pipe line from Mountain View to this city, and a gas distribution system here. That company completed about 50 miles of new gas lines in southwestern Oklahoma during 1929.

Announcing

PLUMB

DOUBLE LIFE

ATIONAL

MERS-AXES-HATCHETS

OR THE OIL COUNTRY

LUMB ADVERTISED TOOLS-THE HIGHEST QUALITY TOOLS MANUFACTURED BY FAYETTE R. PLUMB INC.-ARE NOW STOCKED AT NATIONAL STORES.

THESE TOOLS ARE EASILY IDENTIFIED Y THE BLUE BAND ON THE HANDLES; ND AS A FURTHER GUARANTEE OF UALITY, THE PLUMB AND NATIONAL UPPLY TRADE MARKS ARE STAMPED ON EVERY TOOL.

THE
ATIONAL SUPPLY
COMPANIES

EQUIPMENT AND SUPPLIES

OILWELL MAKES SWIVEL FOR DEEPEST DRILLING

The problem of providing a swivel of sufficient capacity to support the increasing loads due to deep drilling has been met, according to Oil Well Supply Co., Oil City, Pa., by its Imperial No. 150 swivel for drilling in excess of 10,000 feet.

The large and rugged housing provides an oil bath of 10½ gallons capacity. All bearings work in this bath of constantly circulating oil, eliminating excessive heating and the possible withdrawing of the temper from the roller bearings, which causes them to crack or chip under heavy operating conditions.

All bearings are oversize roller bearings especially designed for use in the swivel. The main thrust bearing is a Timken bearing with a capacity of 185 tons at 100 r.p.m. The upper thrust or auxiliary bearing, also Timken, absorbs all shocks or upward thrusts of the swivel body. This bearing has a thrust capacity of 20 tons at 100 r.p.m. and is adjustable from the outside of the swivel.

The radial thrust bearing is a heavy-duty American bearing of 40 tons capacity at 100 r.p.m. and absorbs the radial thrust due to the whipping motion of the drill stem, preventing undue wear on the stuffing boxes and packing.

All stuffing boxes are deep and outside packed, and have bolted glands, eliminating threads which cut and shorten the life of the packing.

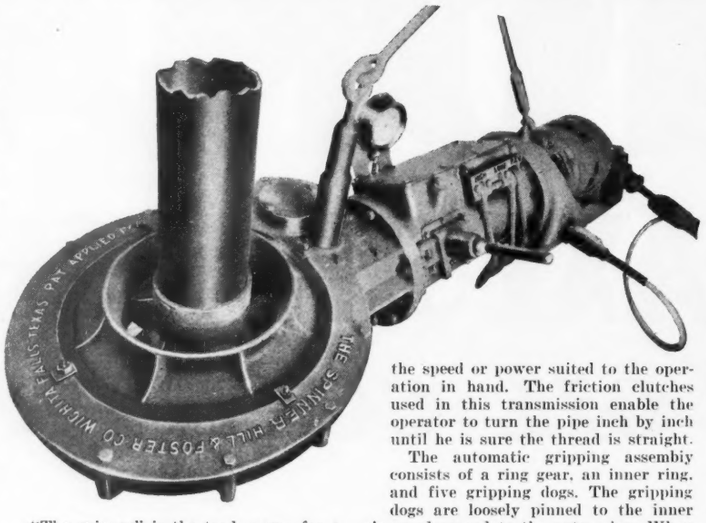
A heavy 4-inch bail, reinforced to 5 inches in diameter at the loop, is forged closed over the 6-inch trunnions. Subsequent spreading of the bail is prevented by steel bail guard plates. The trunnions and two sets of bail rests, for hanging the bail at angles of either 45° above or 45° below the trunnion, are cast integrally with the housing.

There are only two main assemblies in the Imperial No. 150, housing and cap. All parts are inserted through the top of the housing, making dismantling or assembling as simple as possible. Absolutely no weight is carried by bolts. The possibility of mud getting into the oil bath is eliminated by a shield which protects the upper stuffing box.

In a recent factory test in which especially designed testing apparatus was used, and in which actual drilling conditions were approximated, the Imperial No. 150 swivel was subjected to loads as great as 332,000 pounds and speeds as high as 100 r.p.m. Rotated day and night continuously for a period approximating 40 days of drilling time, loads and speeds greater than normally found in the fields for long continuous periods were imposed on the swivel. At no time was the test stopped to make adjustments of any part of the swivel. No excessive wear was found upon examining the bearings, nor did overheating result at any time.

In addition to and before the load test, the water tube stuffing box was given a hydrostatic test to 3,600 pounds. After having been run for seven days, a pressure of 2,500 pounds was put on this stuffing box while running. In neither case did leakage occur. The normal rated capacity of the Imperial No. 150 rotary swivel is 150 tons to 100 r.p.m.

NEW PIPE-SCREWING DEVICE IS CALLED "THE SPINNER"



"The spinner" is the trade name for a new pipe-screwing device manufactured by the Hill & Foster Co. of Wichita Falls, Tex. The purpose of this machine is to supplant the use of the spinning rope and tong and cathead in screwing drillpipe and casing together as they are put into the hole.

The spinner is swung in the derrick like a tong on a counterbalanced line that enables the operators to raise and lower it at will. Then the first section of pipe or casing is set on the slips. The spinner is placed over the top of it and as each additional section of pipe is set in the coupling or tool joint ready for making up the machine is slightly raised, a forward clutch lever is pulled, the pipe is quickly tightened, a reverse lever is pulled, the gripping dogs disappear from view and the pipe can be let in the hole through the machine.

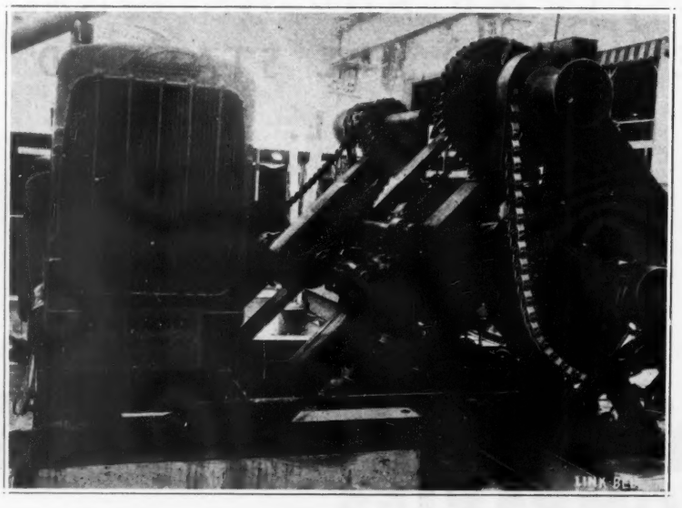
The spinner is composed of three major parts, motor, transmission, and automatic gripping assembly. The five-horsepower, three-phase motor will run on 220 or 440-volt current and has an automatic magnetic throwout switch. The transmission permits the following speed rotations of the pipe: 57, 31, 20, 18, 11, and 6½ R.P.M. This variation gives the speed or power suited to the operation in hand. The friction clutches used in this transmission enable the operator to turn the pipe inch by inch until he is sure the thread is straight.

The automatic gripping assembly consists of a ring gear, an inner ring, and five gripping dogs. The gripping dogs are loosely pinned to the inner ring and geared to the outer ring. When the outer ring is turned to the right the inner ring lags behind and urges the gripping dogs into engagement with the pipe. When the ring gear is turned to the left the inner ring again lags and urges the dogs back under cover and out of the way of the passing couplings as the pipe is lowered into the hole.

To facilitate the screwing of pipe to the proper tightness and thus get the most efficiency out of the threads a device has been installed that registers on a pressure gauge the amount being pulled and also has plainly marked on the gauge the total pressure required to screw up properly all the different sizes of pipe that the machine will handle. This is accomplished by the reaction of the machine to the load being held by a piston rod that holds a piston against fluid that is connected to the gauge. This enables the operator to screw tool joints and casing together intelligently, thus minimizing damage to tool joints, fishing jobs and casing trouble.

All wearing parts are protected from dust and mud and run in a bath of oil which insures lubrication.

LINK-BELT HYPER ROTARY CHAIN DRIVING DRAWWORKS



HIGH-PRESSURE AREAS FRANK MASON'S FIELD

Sales promotion in the high-pressure fields has been undertaken by Frank Mason, for the last seven years factory superintendent of the Shaffer Tool work plant in Brea, Calif. Mr. Mason was the

Frank Mason

first machinist employed by W. D. Shaffer when the small tool works, which is now a large manufacturing plant specializing in pressure control equipment, was originally started. He is familiar with details of manufacturing and testing, and for the last two years has been in charge of advertising and publicity.

Mr. Mason is now in the Mid-Continent, his headquarters being with the Fluid Packed Pump Co. in Tulsa, distributor of the Shaffer line.

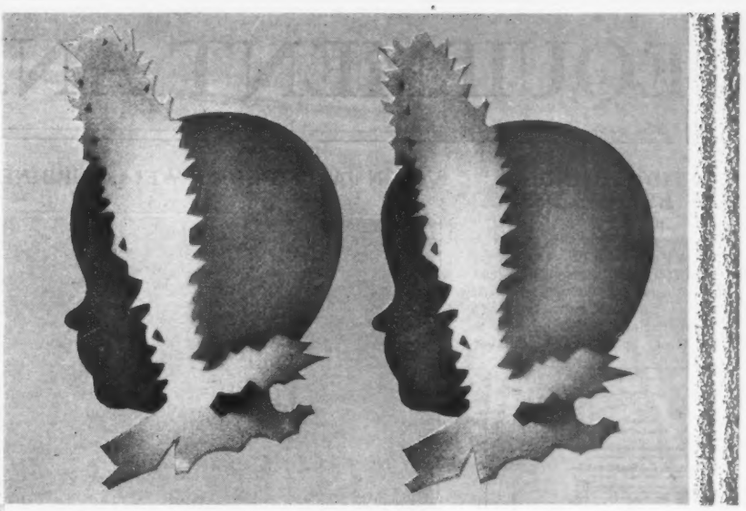
NOT PARTICULAR ABOUT FUEL

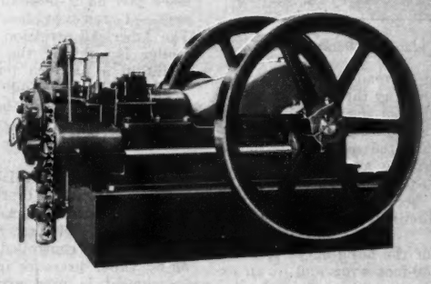
An interesting innovation of the motors used in the United States Army FWD's, made by the Four Wheel Drive Auto Co., Clintonville, Wis., is that they will operate efficiently on the cheapest grades of crude oil, furnace oil or the most expensive pre-Volstead "private stock" as well as ordinary gasoline. A special gas generating manifold vaporizes and permits utilizing fuels having such low combustibility that they will not ignite if a flame is applied directly to the fuel itself. Due to the lack of a natural production of gasoline or any of the fuels of the petroleum series in several of the island possessions of the United States, there is danger that in an emergency, a shortage of these fuels might become serious. However, a little embarrassment like running out of gasoline kerosene, gas oil, or fuel oil in the new United States Army FWD's is apparently not serious, for wood alcohol prevails in almost unlimited quantities in these territories and is satisfactory as a fuel in these trucks.

NEW TRACKSON DISTRIBUTORS

Among the new distributors who have been appointed recently to handle Trackson tractor equipment for McCormick-Deering tractors is the Edward R. Bacon Co., San Francisco, who will cover the San Francisco territory. The Olympic Machinery Co., Seattle, Wash., has been appointed to handle the Trackson line in the State of Washington.

This Unit Is Really TWINS





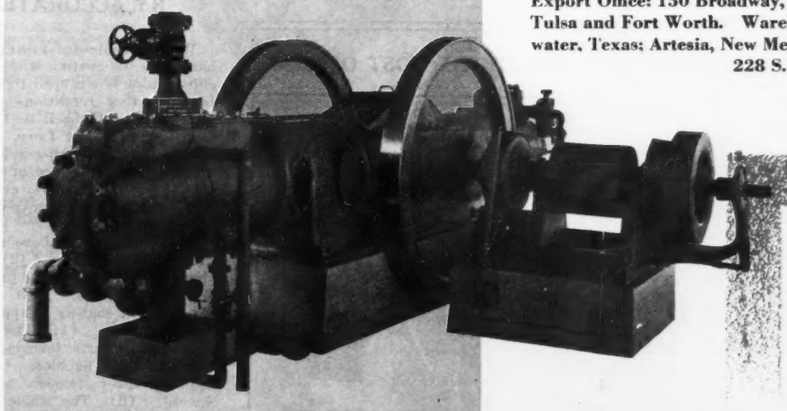
But Works for ONE Pay Check

The CLARK "40" Pumping Engine and Compressor Unit is an economical machine which does two kinds of work—enabling operators to handle small leases in the most profitable manner by pumping wells or putting them on air lift—at a cost in keeping with small production. Either the exceptionally sturdy CLARK Pumping Clutch or Compressor End can be used without change in engine bedplate. Compressor cylinders are available in various sizes.

THE CLARK "40"

CLARK BROS. COMPANY Olean, N. Y.

Export Office: 150 Broadway, New York City. Mid-Continent Sales Offices: Tulsa and Fort Worth. Warehouses: Tulsa, Oklahoma; McCamey and Sweetwater, Texas; Artesia, New Mexico. California: Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles.



The new CLARK "40" is a highly perfected 4-cycle engine. Fully enclosed and automatically lubricated with filtered oil. Use of crosshead eliminates piston slap. Moderate speed—200 R. P. M.—gives durability.

COMPRESSOR *and* PUMPING ENGINE UNIT

CLARK

EQUIPMENT AND SUPPLIES

COMPUTATION IS MADE EASY BY THIS DEVICE

Determination of coefficient and volume, correct orifice size for any given volume, and differential pressure of gas flowing through a line, in connection with standard orifices and orifice meters, are made simple operations requiring only a few minutes' time, by a new calculator

chart just released by the Natural Gas Equipment, Inc., Los Angeles, Calif. Results are indicated with sufficient accuracy for field requirements or for rapid checking of closer computations where required for customers' accounts.

The illustration shows the form of the calculator; and complete directions for its operation are given on the jacket which is supplied for its protection.

The rapid flow calculator was designed particularly for use with the Anubis differential pressure recorder, but it works with any other type of standard orifice meter. The device was designed and is copyrighted by Natural Gas Equipment, Inc. Copies are supplied upon request to the Los Angeles, San Francisco, or Tulsa offices of the company.

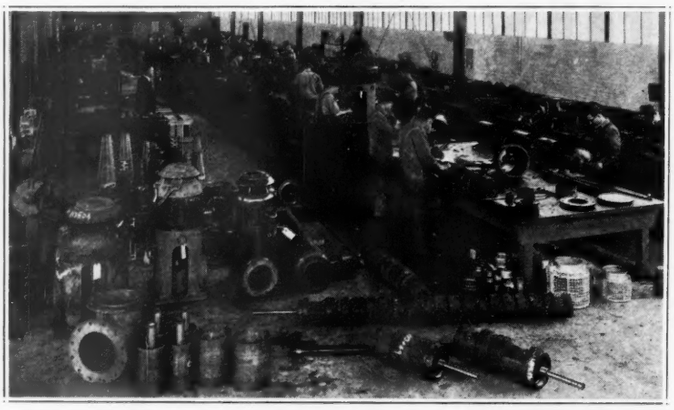
OFF FOR BUENOS AIRES

J. W. Des Champs

Mr. Des Champs salied from New York April 18 for Buenos Aires, Argentina, to open the Argentine office of the Lucey Products Corp.

The Connersville Blower Co., Inc., of Connersville, Ind., has moved its Chicago sales office to 20 North Wacker Drive. After May 1, the New York sales office of the company will be in the Graybar Building, 520 Lexington Avenue.

BYRON JACKSON DEEPWELL TURBINE UNIT'S NEW HOME



Interior of the new Byron Jackson Co. Deepwell Turbine plant in Berkeley, Calif.

Regarded as one of the best equipped and most modern industrial plants in the West, a new building has been occupied by the Deepwell Turbine unit of the Byron Jackson Pump Division in Berkeley, Calif.

The structure is of brick, steel and glass, and not only provides enlarged quarters, but contains facilities calculated to maintain a maximum of efficiency in assembly and shipment.

Along the wall on one side, which may be designated as the "pump and built-in head assembly section," are 125 feet of specially designed benches, equipped with vises and other necessary tools. In front of the benches are eight 6'x12' metal covered assembling tables. Traveling over the section is a 2-ton crane operated from the floor.

The opposite side of the building, or its main section, is used for the storage and handling of incoming and outgoing materials, including rotors and stators. Lost motion is kept to a minimum.

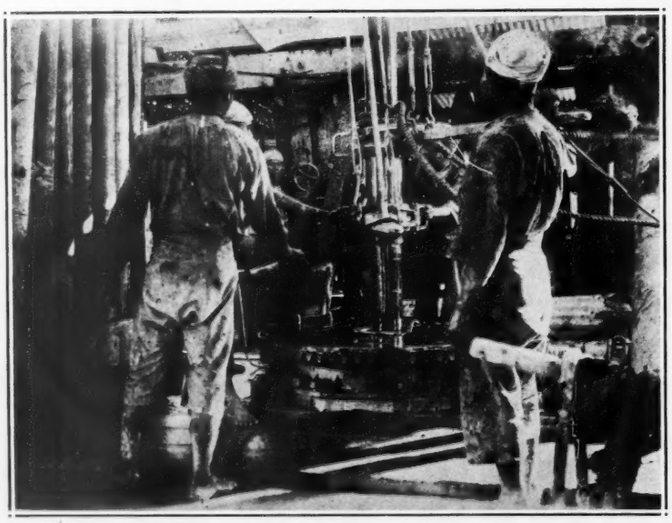
Over this main section there is a 5-ton floor-operated crane is so designed that it can be run out of the building and over the adjoining railroad tracks. Trucks may drive all the way through the section.

The day shift has the utmost sunlight without the disadvantage of direct rays or glare, through the use of "Bestolite" glass. At night the assembly section is lighted by 500-watt mazda lamps. The main section, because it is higher, is brilliantly illuminated by 1,000-watt mazda lamps.

The design of the building permits the addition of a 30-foot wing and of an extension in the rear when these become necessary. The present size is 70'x180' and this will ultimately be enlarged to 100'x275'.

Among the more important features of the new shop equipment are a 54-inch Bullard vertical lathe, 7-inch Carlton radial drill press, two 4B Universal Gisholts turret lathes, two 15"x8' Rockford geared head engine lathes, No. 50 Giddings & Lewis horizontal boring mill, 30"x12' type D Monarch engine lathe, a 24"x18' double carriage Monarch engine lathe, a 14"x120" Norton grinder, and a No. 3 16-foot bed South Bend drum lathe.

THIS CREW SHOULD WORRY ABOUT THE COST OF SHOES



The high cost of shoes does not worry the coolie in Negya, Chauk, Burma, and it is said that these natives are quick to learn to operate the latest types of rotary drilling machines such as the Emsco outfit which is shown in the picture. This photograph was taken by A. B. Stephens.

PRECISION INSTRUMENTS CONTROL AUTOMATICALLY

The American precision temperature controller, made by the Consolidated Ashcroft Hancock Co., Inc., Bridgeport, Conn., is designed to maintain a constant temperature. Generally the advantages of automatic temperature control may be summarized as follows: Effects a saving in fuel; prevents loss of material, labor, fuel and manufacturing time, caused by spoilage and rejection; saves labor by relieving workmen of adjusting valves and watching temperatures; guarantees uniform production; insures increased production.

It costs money to produce temperature. Therefore, accurate and constant control of temperature is important. To minimize errors in manufacture and eliminate guesswork is what automatic control will do. This applies to temperature processes just as it does to machinery processes—it removes the human element. The American precision temperature controller is said by the manufacturer to maintain a uniform temperature better, quicker, cheaper and more accurately than can be done by hand. It will automatically regulate the temperature within a single degree under favorable conditions.

The American precision pressure controller is identical to the precision temperature controller made by the same company, except that it is actuated directly by the controlled pressure instead of by vapor pressure in the bulb. This instrument is used extensively for controlling pressures in all types of apparatus, using steam for cooking or heating such as retorts, process kettles, pump governors, oil burners, platen presses, etc. It is also well adapted for reducing pressures of steam, oil, air and water.

The small type is good for line pressures up to 250 pounds. The large type is limited to line pressures not exceeding 125 pounds. The Consolidated Ashcroft Hancock Co. has prepared a new catalog describing these devices.

PIPE COATING APPLIED BY ACCURATE PROCESS

With its patented process of wrapping bare pipe in coating and wrapping machines, pipe is wrapped tightly under uniform weather conditions in the factory by the Hill, Hubbell & Co. division of the General Paint Corp. method. This process gives the pipe a bitminous coating, wrapped with one or more layers of felt at the mill, where, according to the company, the following conditions are enforced:

(1) The pipe is thoroughly cleaned of rust and mill scale. (2) The pipe is thoroughly dry when the primer and coating are applied. (3) The required thickness of coating is applied before the felt is put on. (4) The coating is applied in two parts, insuring freedom from pin holes and bubbles. (5) The felt is applied under tension and is exactly spaced. (6) The whole process is mechanical, involving no waste. (7) The entire operation goes on under roof and can proceed night and day regardless of weather. (8) Exact temperature control of the bitumin is possible.

HANDLES LARGER MOTORS

The ability to control motors of greater horsepower than those controlled by the superseded type is the principal advantage of a new enclosed, magnetic, reversing switch announced by the General Electric Co. This switch, designated as CR-7009-B-18, supercedes the CR-7009-B-5 switch of the same type.

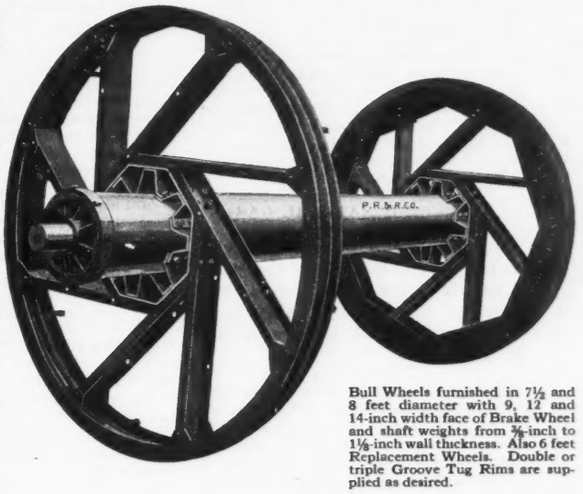
WHEELS

Hard Service Into Profits

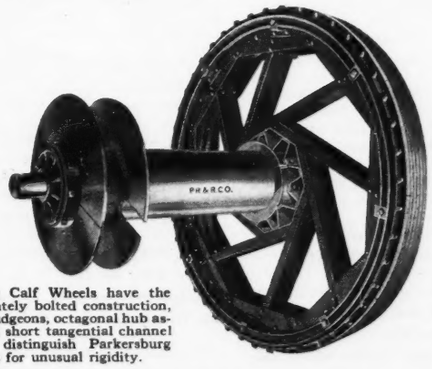
Wheels, Band Wheels — those power-driving, load-Rig where quality determines costs, Parkersburg equipment proves its economy.

Because Parkersburg Wheels are *engineered* for the job, they meet this gruelling duty day in and day out and turn hard service into profits with longer life and a greater return on investment.

Three exclusive and patented features of Parkersburg Wheels assure this superior performance: (1) Gudgeons that can't come loose because they are pressed into the shaft under hydraulic pressure up to 70 tons, bound with forged bands shrunk on shaft and then clinched by bolts through band, shaft and gudgeon. *They can't come loose.* (2) Patented octagon hubs of steel welded plates are bolted to shaft and prove the greater rigidity of shorter channel arms. They provide easy assembly and interchangeability. (3) Parkersburg patented adjustment feature makes quick and easy adjustment or replacement of cants. Complete renewal of wood face becomes a two-hour job instead of a two-day shutdown.



Bull Wheels furnished in 7½ and 8 feet diameter with 9, 12 and 14-inch width face of Brake Wheel and shaft weights from ⅜-inch to 1⅛-inch wall thickness. Also 6 feet Replacement Wheels. Double or triple Groove Tug Rims are supplied as desired.



Parkersburg Calf Wheels have the same accurately bolted construction, the same Gudgeons, octagonal hub assembly, and short tangential channel arms that distinguish Parkersburg Bull Wheels for unusual rigidity.

Type "M" Band Wheels with Adjustable Wood Face.

By simply changing hub spacer and using longer bolts through the cants, the wood face Band Wheel can be made any width desired. Type "M" Band Wheels may be split in two halves for transporting—a convenient and essential feature to conform to road laws in certain states.

PARKERSBURG PRODUCTS

Steel Wheels— Bull, Calf and Band

Steel Derricks and Crown Blocks

Portable Drilling Machines (Wood and Combination-Steel)

Chain-Driven Sand Reels and Bailing Reels

Rig Irons

All-Steel Standard Rigs

Bolted Steel and Aluminum Tanks

Miscellaneous— Drilling Equipment Steel Walking Beams and Pitmans

We Subscribe to A.P.I. Standards

Telephone Our Nearest Branch for Complete Information

Main Offices and Works

PARKERSBURG · WEST VIRGINIA

NEW YORK - - - TULSA - - - FORT WORTH - - - HOUSTON

Branches In All Active Fields

129-A

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

MERCAPTANS AND TREATING PROCEDURE

We seem to differ as to the method of removing hydrogen sulphide and mercaptans from gasoline. My theory for the way to do this is to inject a neutralizing agent such as ammonia, lime, or caustic into the crude as it is being heated up in the still; the mercaptans break up under heat and if then subjected to a neutralizing agent best results can be obtained. Our chemist suggests that the gasoline should be distilled and then treated with sodium plumbite. Our crude contains 0.25 per cent total sulphur, but another crude is available containing 0.5 per cent sulphur.—B. V. S.

We do not know how many forms of sulphur and exactly what organic compounds containing sulphur are present in any crude oil. It is thought that free sulphur, hydrogen sulphide, mercaptans, and sulphates may be present in some crudes. The ordinary treating operations are based on the applications of chemicals and distillation for the removal of these forms or, at least, a reduction in the quantity of total sulphur.

Sulphur in several different forms will cause corrosion, but the treating methods are not necessarily for the object of solving a corrosion problem. The treating operation has for its principle object the finishing of a commercial gasoline. Corrosion of refinery equipment is something else, but very often a pretreatment of the crude and the addition of chemicals to the still or the condensing system will aid in reducing the sulphur content of the product. Considerable corrosion to equipment may result when refining an oil containing traces of water and salt because of the formation of hydrochloric acid. Ammonia is added to towers and condensers to correct this condition, but is not used in sufficient quantities to neutralize sulphur compounds. Lime, caustic soda, and sodium carbonate are being used in pretreatment units and stills, and should act on hydrogen sulphide, organic sulphides, and acid. Such extensive treatment is not necessary for ordinary oil.

Ammonia is adapted for neutralizing hydrochloric acid in a still, etc., because it is active as a gas and the product of neutralization, ammonium chloride, is volatile. Lime and caustic soda form solids which may be deposited in the still or tubes resulting in embrittlement or hot spots; consequently, they cannot be used in a still except under carefully controlled conditions.

A crude containing 0.25 per cent total sulphur should not require a very exceptional treatment. The conventional method is to wash the raw gasoline with water and follow with a caustic wash for the removal of hydrogen sulphide. Then finish with the usual doctor or sodium plumbite solution. A refractory gasoline may require treatment with sulphuric acid, an alkaline wash, rerunning, and the overhead sweetened. Laboratory experiments will enable you to determine if this is necessary. The modern treaters, both the acid and sweetening stage, are enclosed for continuous operation. See J. W. K. this page.

LIQUEFIED NATURAL GAS

We would like to obtain data covering the kind of gas, B. t. u. per foot, B. t. u. per gallon, cost and any other information you have, that is being sold in cylinders for domestic gas systems.—J. W. S.

There are numerous hydrocarbon mixtures that are compressed and distributed in cylinders throughout the United States for domestic consumption in districts where natural or manufactured gas is not available. One of the earliest forms of bottled gas was a very volatile, high gravity, gasoline but this material has been replaced to a considerable extent by what is known as liquefied gas. This product is considered to be better because of uniform quality, no accumulation of liquid residue, higher heating value, and the delivery of a concentrated pure natural gas.

The natural hydrocarbons are extracted from natural gas and concentrated by reduction under high pressure to the liquid condition; when the pressure on the cylinder is reduced the liquid changes to gas which is conveniently conducted through ordinary gas pipes and delivered to the appliances. This gas is suitable for cooking, heating, and illuminating units. It is being used for a large number of special purposes where high temperatures and freedom from objectionable products of combustion, such as sulphur compounds, are desirable.

The cylinders for liquefied gas vary in size from about 2 pounds to 100 pounds and carry pressures from a few pounds to 300 pounds to the square inch.

The retail price of liquefied gas is usually from 9 cents to 30 cents a pound. This price is influenced by the delivery conditions; some gas is delivered in cylinders, some from tank wagons to the cylinders in place, and to a limited extent through a pipe system.

PHYSICAL CONSTANTS HYDROCARBONS IN LIQUEFIED GAS

	Ethane	Propane	Butane	Pentane
Boiling point	—135°F.	—49	+34	+97
Specific gravity Air=1	1.038	1.523	2.007	2.491
B. t. u. per				
Cubic foot	1,164	2.519	3.274	4,029
pound	22,240	21,620	21,320	21,130
gallon	83,000	96,900	106,500	110,200
Cu. ft. gas per gallon	46.7	38.2	32.5	27.3
Pounds per gal.	3,716	4.462	4,997	5.214
Cu. ft. per lb. at 60°F.	12.594	8.587	6.514	5.248

There are four compounds found in natural gas that may be included in what is termed liquefied natural gas for household use; these hydrocarbons are ethane, propane, butane and iso-butane. Propane is suitable for distribution over a wide territory where there may be great differences in temperature. One company has recently entered the field with pentane, but since the boiling point of commercial pentane is from 82° to 97°F., this product is not classed as liquefied gas.

DECOMPOSITION OF MERCAPTANS

At what temperature do the mercaptans break up? I have been unable to find this in the various oil publications and will appreciate it if you will answer this question.—J. W. K.

We are not certain that crude oil contains mercaptans; the several investigators have reported the properties of these compounds which have been separated from the several distillates. It appears that the mercaptans may be decomposition products formed throughout the entire distilling range. They have been identified in all of the distillates, from the very lightest to the heaviest fractions. Usually the quantity of sulphur increases with temperature. A crude oil containing 0.35 per cent sulphur produced raw distillates as follows—Gasoline containing sulphur 0.02 per cent; kerosene, 0.05 per cent; gas oil, 0.10; lubricating distillate, 0.77 per cent. Probably the greater part of this sulphur was in the mercaptan form.

The lower mercaptans are easier to remove than the higher ones; they react with sodium hydroxide solution but this solution has no appreciable effect on the heavier mercaptans. This fact suggests that the mercaptans are not decomposed at the temperatures met with during distillation.

We have no information showing the decomposition point of the known mercaptans. Ethyl mercaptan boils at 95° F. and butyl mercaptan has a boiling point of 208° F. Actual decomposition would without doubt require much higher temperature.

VACUUM DISTILLATION LUBRICATING OILS REFERENCES

I would like very much to obtain some references to vacuum distillation of lubricating oils, especially Mid-Continent crudes. Are there any United States bulletins on this subject?—J. P. J.

Representative articles on the subject of vacuum distillation are mentioned in the list following:

Ashworth, A. A.—Apparatus for Fractional Distillation Under Vacuum. J. Inst. Pet. Tech., April, 1929, page 211.

Brooks, B. T.—Distillation of Lubricating Oils Under High Vacuum. I. & E. Chem., Aug., 1926, page 789. Bibliography.

Gavin and Foster.—Apparatus for Vacuum Distillation of Lubricating and Heavy Petroleum Oils. U. S. Bureau of Mines, Report of Investigations, 2819.

Harnsberger, A. E.—Application of the Pipe Still to Vacuum Distillation. Am. Pet. Inst. Bull., Jan. 3, 1929, page 41.

Petty, Earl.—Application of Vacuum Distillation to Producing Lubricating Oils. The Oil and Gas Journal, Nov. 7, 1929, page 90.

Rankin, K.—Schulze Process for Making Lubs. The Oil and Gas Journal, Feb. 26, 1925, page 115.

Steinchneider, Leo P.—The Principles of the Koenigsfeld System of High Vacuum Distillation of Two Phase Evaporation. J. Inst. Pet. Tech., Aug., 1928, page 621.

Willson, C. O.—Refining Pennsylvania Lubricants. The Oil and Gas Journal, Nov. 1, 1928, page 140.

Ziegenhain, W. T.—Apparatus Permits Sampling Oil During Vacuum Distillation. The Oil and Gas Journal, July 18, 1929, page 133.

Ziegenhain, W. T.—Vacuum Distillation of Lub Oil Favored in Mid-Continent Area. The Oil and Gas Journal, Aug. 15, 1929, page 133.

CASTOR OIL PROPERTIES AND USE

It would be much appreciated if you would give a list of the ordinary tests of the quality of castor oil and also what is the method for blending it with lubricating oil?—R. H.

Castor oil has a Saybolt viscosity over 1,000 at 100° F. and above 90 at 210° F. A sample tested as follows: Gravity, 15.5 A.P.I.; flash, closed cup, 485° F.; flash, open cup, 505° F.; Saybolt viscosity at 100° F., 1,485; Saybolt viscosity at 210° F., 110; pour, 14° F.

This oil does not blend readily with mineral oil, but is freely soluble in rosin oil; it becomes soluble in mineral lubricating oils in the presence of rape-seed oil, lard oil, and tallow. When heated under pressure for several hours it becomes more soluble in the mineral oils. There is one peculiar difficulty that may develop when castor oil is used to cool bearings, and its use is not recommended in a circulation system; that is the formation of deposits.

It is used for the lubrication of bearings, especially of the heavy duty type, and is extensively used abroad for lubricating the rotary airplane engines. The chief objection to the use of castor oil as a lubricant appears to be its tendency to form sticky and gummy substances through oxidation. When decomposition sets in acids are produced. These facts are the cause of some corrosion and the sticking of connecting rods, etc.

PIPE LINE FOR GASOLINE

Can you give me some information together with location of the pipe line in Pennsylvania used for transporting gasoline from the east coast inland?—L. M.

The Standard Oil Co. of Pennsylvania, early this year began the transportation of gasoline through a pipe line from Bayway, N. J., westward to Cooks Ferry, near Pittsburgh, Pa. The length of this line is approximately 400 miles, making it the longest gasoline line in operation or ever attempted. The pipe used in this line varies from 6-inch to 12-inch.

The Pennsylvania Standard is an operating company controlled by the Standard Oil Co. of New Jersey. This pipe line was formerly used by the Tuscurora Oil Co. for sending crude oil eastward to the refineries at Bayway and Bayonne, N. J.

The line has been thoroughly cleaned so that gasoline may be delivered in condition ready for use. The principle change from the former condition was the replacement of the 35,000 and 55,000 bbl. tanks along the line with gas tight 10,000 bbl. tanks for temporary storage at the pump stations. The former capacity of the line was 25,000 bbls. daily and it is expected that the same quantity of gasoline, approximately 1,050,000 gallons, will be handled.

Two articles about this line have been published in The Oil and Gas Journal; November 14, 1929, page 37, and December 5, 1929, page 56. An article covering the latest developments in the construction and operation of gasoline pipe lines will appear in the Annual Pipe Line Number of The Oil and Gas Journal which is to be issued June 5, 1930.

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

In case an immediate answer is important, one will be given by mail if the writer requests it.

BETTER TO USE OIL

When there is difficulty in pulling casing I understand oil sometimes is circulated to free it. Is there any reason for using oil in preference to water? Couldn't you get just as good results with water?—S. E. N.

Your question refers to pulling casing but this method of circulating oil has been most generally applied to pulling strings of drill pipe in rotary holes, although there seems to be no reason why it would not apply equally well to pulling casing.

The oil is used because it has been found that water has a tendency to channel and instead of penetrating all the mud cavings that have settled around the drill pipe it really packs them tighter.

Oil on the other hand will penetrate through all of the material in the hole around the drill pipe and at the same time it acts as a lubricant and reduces the friction between pipe and cavings.

The crude oil seems to act in this instance much as penetrating oil will act in loosening threaded on bolts or pipe when it is difficult without the use of oil to remove nuts or fittings. The oil will penetrate through the rust in the threads in a short time and the parts can be separated.

In some instances it is also desirable to use oil rather than water because water might penetrate back into a formation and carry mud or fine material with it and seal the sands, whereas oil does not have this tendency and can be used more safely where some fluid must be used to loosen the cuttings and cavings that have packed around the drill pipe.

In pulling frozen strings of casing it is possible that oil would be satisfactory but as pumps are not usually available when casing strings are being pulled it is not the usual practice followed.

PROTECTION FROM LIGHTNING

I read a statement recently that more than half of the oil-tank fires were caused by lightning, which sounds to me like an exaggeration. Can you tell me whether it is true or not? I would like to know whether there is anything that can be done to reduce the likelihood of lightning striking a building. Is the old-fashioned lightning rod any good? That is, is it scientifically correct, or is it just made to sell to gullible people?—T. A. D.

The statement that more than half of the oil-tank fires are caused by lightning is probably correct. In a report on records of oil-tank fires in the United States, 1915-25, published by the American Petroleum Institute, it is stated that lightning caused 55 per cent of the fires recorded.

The old-fashioned lightning rod, when properly installed, is regarded as a real protection. In this connection you may find of interest an article, "Faith in Lightning Rod Is Revived," in The Oil and Gas Journal of April 12, 1928, describing tower protective systems, employing the lightning rod principle, installed by The Texas Company on two of its tank farms.

Various measures are adopted by the prudent for minimizing the danger of property loss from lightning. On this point the code for protection against lightning approved by the Bureau of Standards says:

"Certain types of structures used for the storage of inflammable liquids and gases are essentially self-protecting. Protection of a greater or less degree may be secured in the case of others through the installation of various types of protective equipment, such as screens, rods, protective towers, and by other means.

"Protection of structures and their contents from lightning involve the following principles:

"(a) The storage of inflammable liquids and gases in all-metal structures essentially gas-tight.

"(b) The use in all necessary breathing vents of efficient flame arresters.

"(c) The maintenance of containers in good condition, so far as potential hazards are concerned.

"(d) The avoidance, so far as possible, of the accumulation of explosive mixtures in and about such structures.

"(e) The avoidance of spark gaps in metallic conductors or between metallic conductors at points where there may be an accumulation of explosive mixtures or an escape of inflammable vapors or gases to the air.

"(f) In connection with structures not inherently self-protecting, the establishment of cones of protection through the use of grounded screens, rods or towers, or the equivalent.

"(g) The location of structures containing inflammable liquids and gases not inherently self-protecting, in positions of lesser exposure with regard to lightning. Thus elevated positions should be avoided."

CALCULATING HEAD ON PUMP

I do not understand just what is meant by the word "head" when it is used in connection with the work or capacity of a pump. Sometimes the term "static head" is used. I wish you would explain the meaning of these expressions.—T. O. I.

Static head, in the case of a pump, refers to a difference in elevation. The lift required of a pump is the difference in elevation between the point at which the liquid is delivered and the point at which the liquid stands originally. The difference is measured from the surface of the liquid to be pumped to the surface of the liquid at the place of delivery. In the case of a boiler feed pump, for example, the static head is measured from the water line in the boiler down to the surface of the water in the hot well. In those cases where the liquid, in order to increase the flow, is pumped to a lower level, the difference in the levels is negative.

Head on a pump commonly is thought of as static head. This is correct so far as it goes, but head means more than this. "Pump-Fax," a handbook published by Goulds Pumps, says in this connection:

"A good definition of head is the work that must be done to move the water, or other liquid, from the place where it originally lies to the place where it is to be put. If, then, 1 pound of liquid is lifted 1 foot upwards without change of pressure, the work done is 1 foot-pound, if there is no friction on the way up and if the water starts and ends up at rest. If there is friction on the way up, additional work must be done to overcome that resistance.

"In the case of a given liquid flowing through pipes, the friction depends on the speed of the liquid, the size and length of the pipe and the roughness of the pipe walls. Then if the water is moving, it has kinetic energy, too, and work must be done to give it this energy. Still one other factor comes in. If the liquid is delivered to a pressure tank, such as a steam boiler, it must be forced in against that pressure. This, however, is equivalent to an additional head equal to the height of the liquid column which will give the tank pressure at its lower end.

"We may now express our ideas of head in a formula, as follows:

$H = z + h_v + h_p + h_f$, where

H = head, or total work done by the pump on 1 pound of the liquid,

z = direct static head.

h_v = kinetic energy which the liquid carries away with it,

h_p = lift equivalent to the pressure at the point where the water is delivered,

h_f = friction overcome in pipes, fittings and connections,

and the units of all terms are feet. It should be noted that work done on 1 pound of liquid is foot pounds per pound which reduces to units of feet.

"In the head calculations, it makes no difference what liquid is to be pumped except as the viscosity and density of the liquid may influence the friction. The head is always in feet height of the liquid handled."

WHY WAS IT CALLED THAT?

STABBER

In pipe line construction it is the job of one man to see that each joint of pipe as it is put into place is in alignment with the joint to which it is to be screwed. In the lunging motion accompanying this work pipe line workmen are presumed to have seen some resemblance to the act of stabbing with a knife or other weapon, with the result that the job came to be designated as "stabbing" and the man who performed it as a "stabber." Similarly the man who attends to the alignment of pipe being run into a well is called a stabber.

MARIETTA PROCESS

The Marietta process is referred to as a method of repressuring. Please tell me what this process is and whether its use is confined to any particular section of the country. I would like to know how this process differs from other processes and if it would not be too much trouble I would like to have you tell me briefly what the principal features of repressuring are.—S. A. E.

You have received an erroneous impression apparently that there are various methods of repressuring and that the Marietta process is just one of them. As a matter of fact, the Marietta process is the method (not one of several methods) of increasing the production of petroleum by repressuring; that is, introduction of gas (or air) into the oil sand, usually by means of compressors, through injection wells while others are pumped for the oil thus forced into them. These injection wells, also called input or key wells, are sometimes drilled for the purpose and sometimes are simply old wells taken off production.

Repressuring is called the "Marietta" or the "Smith-Dunn" process at times because Smith and Dunn of Marietta, Ohio, are credited with having been the first to install compressor plants in connection with groups of wells in southeastern Ohio. On one property they reported an increase from 4½ bbls. a day to 32½ and on another from 22 bbls. a day to 70.

Repressuring is not confined to any one district although the best results are said to be obtained where the oil comes from sand of even porosity and not too tight for effective movement.

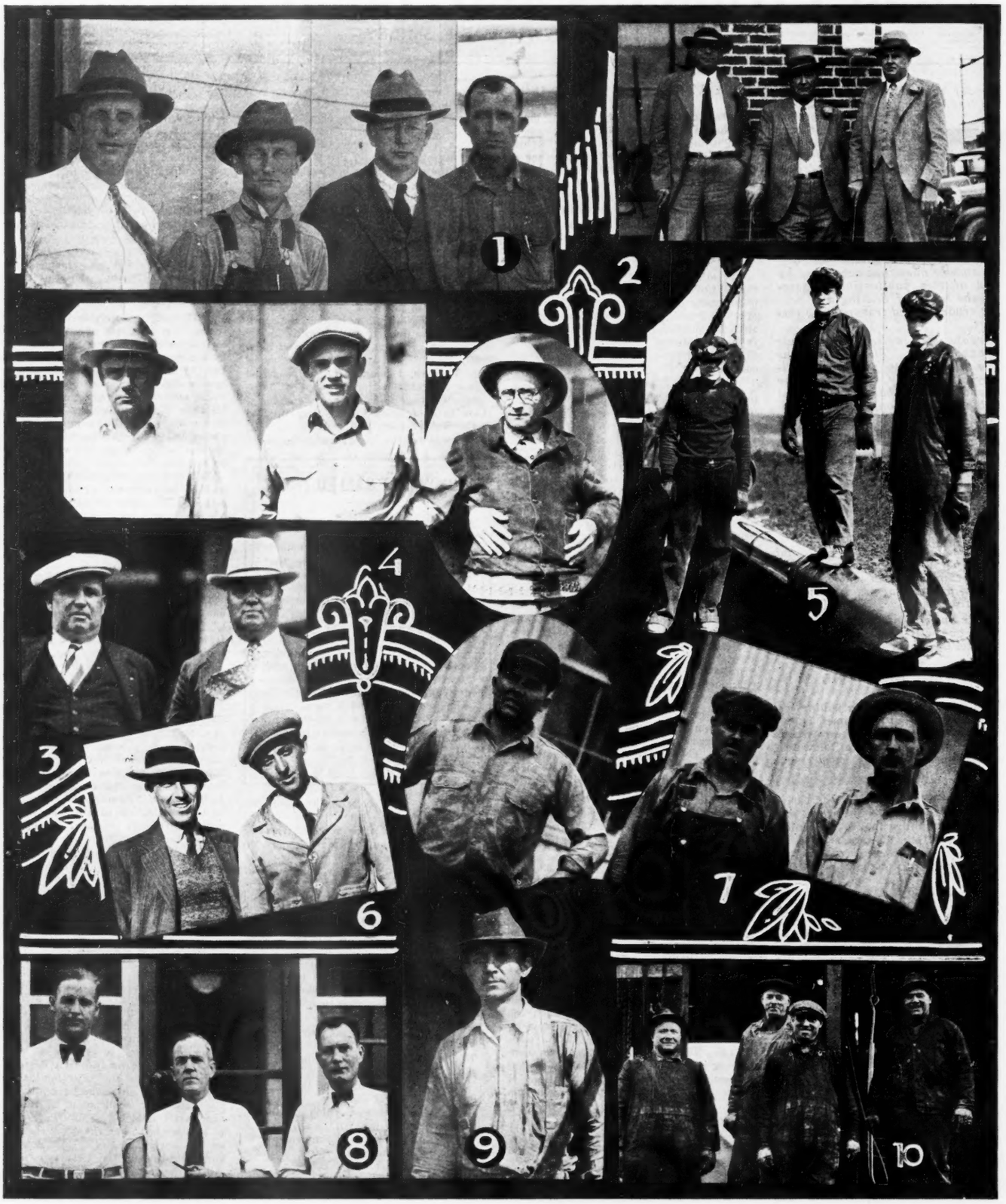
Much has been written on the subject of repressuring and The Oil and Gas Journal has printed many articles on it. For the purposes of answering your question briefly it may be necessary only to say that four different purposes and methods of procedure are recognized under the general head of repressuring. These are pressure maintenance, pressure restoration, gas drive and gas storage. In his book, "Function of Natural Gas in the Production of Oil," H. C. Miller, senior petroleum engineer in the United States Bureau of Mines, says:

"Pressure maintenance differs from pressure restoration principally in the time the operation is begun. Where gas injection is begun at once with the idea of maintaining the reservoir pressure as near its original value as possible, the operation is pressure maintenance; and where it is begun at a later date and carried on either simultaneously with production operations or intermittently with such operations, it is pressure restoration (i.e., repressuring). Probably neither operation ever will be perfect in practice, and both may approach the third type of operation because of mechanical limitations and direct by-passing of the gas through sands already partly depleted.

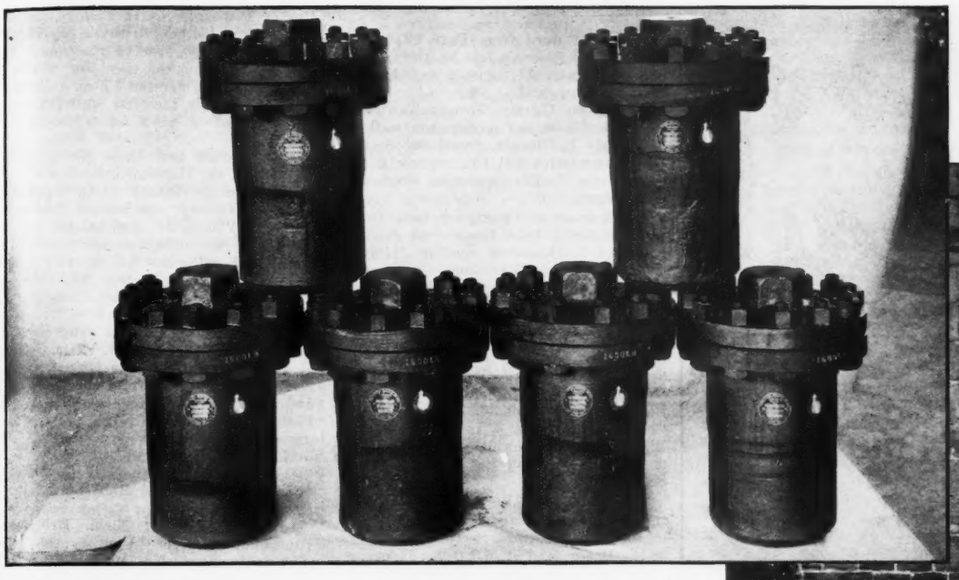
"Gas drive is the injection of gas to drive or carry along mechanically toward the producing wells some of the oil in the partly depleted sand. The emphasis of this method is on the drive rather than on the lowered viscosity and other pressure features of the first two methods. All of the methods have common effects, and the results of each partake of the benefits of the last, which is gas storage. Where the demand for gas is seasonal, the summer surplus often can be stored to good advantage in partly depleted oil or gas reservoirs to be drawn upon in times of greater need, at the same time do its part in increasing oil recovery from the sands in which it has been stored."

Various theories have been advanced to explain just how compressed gas or air moves the oil within the sand body.

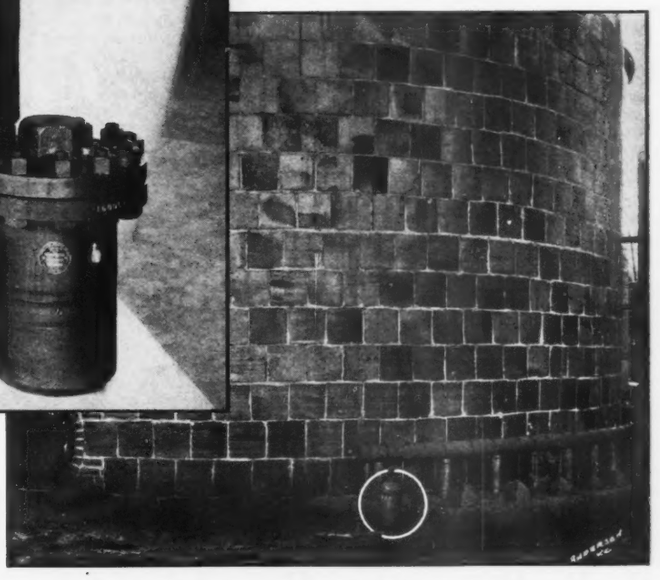
Among the Field Workers in Different Areas



(1) Left to right: J. P. Johnson, turn foreman; C. J. Brown, stillman; J. P. Cox, district supervisor, and P. F. Crow, plant supervisor, Coltexo Corp. No. 1 Lefors, Tex. (2) W. L. Todd, general superintendent, Simms Oil Co., Dallas, Tex., H. W. Scott, Simms Oil Co., Odessa, Tex., and C. S. Fisher, Simms Oil Co., Shawnee, Okla. (3) Left to right: S. L. (Heavy) Sterritt, superintendent of production, Mexia, Tex., and C. B. (Shorty) Shaffer, superintendent, Crane, Tex., Atlantic Production Corp., "the Siamese twins." (4) Left to right: J. P. Williams, Williams & Williams Drilling Co.; M. E. Tatum, Republic Production Co., and Pat Tatum, superintendent, Kirby Petroleum Co., Big Spring, Tex. (5) J. M. Ranick, C. A. Ware and Paul Daniels, of Kelly Dempsey Co., working on the Empire's line out of Oklahoma City, Okla. (6) W. F. Dean, The Cooper-Bessemer Corp., sales and service man for the Panhandle, and J. B. Massa, superintendent, White Eagle gasoline plant, Pampa, Tex. (7) R. C. Connelly, operator; J. R. Hampton, oiler, and J. J. Ramsey, chief engineer, Arkansas Natural Gas Corp., Magenta gasoline plant, near Monroe, La. (8) T. D. Wafer, R. B. Hamilton and J. I. Roberts, all gas dispatchers for Arkansas-Louisiana Gas & Fuel Co., Sterlington, La. (9) C. B. Whaley, tool dresser. (10) Drilling crew on the derrick floor at the discovery well of the Muskegon, Michigan, Field; left to right: Fred Krumm, Lewis Augenstein, Guy L. Miller, and William Augenstein.



Below: Armstrong standard trap draining coils in a tank owned by one of the largest oil companies. At left: 6 Armstrong forged steel traps for gasoline service at 1500 lbs. pressure, bought by a large oil corporation.



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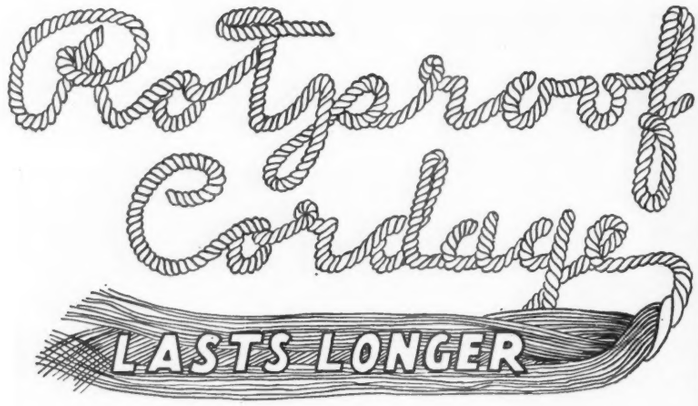

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CENTRAL WEST FIELDS

(Continued from Page 80)

Smith & Watterson's test on the Charles Salzer, Section 11, was a dry hole in the Cow Run sand.

In Vinton County, Brown Township, I. C. Robinson has a fair gas well on the Lewis P. Draper, fractional Section 12. Co-operative Oil Co. reports a dry hole on the B. Throckmorton, Section 4, Knox Township.

In Tuscarawas County, Oxford Township, Gordon Oil Co. has a good gas well in No. 1 J. H. Davis, Section 21, from 3,661-68 feet. Blackstone and others are drilling on the A. H. Boltz in the second quarter. In Washington Township, Gordon Oil Co.'s No. 1 Martha Carroll, Lot 32, is reported good for 70 bbls. from 3,662-72 feet. Same company is drilling No. 2 George W. Asher, Lot 31. George Jewell and others are drilling on the Anna Mook, Lot 36. Capitol Drilling Co. is drilling No. 3 Lewis Little, Lot 32, and the Hopewell Oil & Gas Co. made a location on the Stewart Asher, Section 18.

In Fairfield County, Rush Creek Township, Perry Sturm and others' second test on the D. P. Walters, Section 5, was dry in the Berea sand at 575 feet.

In Guernsey County, Wheeling Township, the East Ohio Gas Co.'s No. 5 E. C. Quillan, Section 11, showed 15 bbls. initial from 3,399 to 3,407 feet, total depth 3,550 feet. The Kemrow Co. is drilling No. 2 J. W. Fowler, Section 10. Ohio Fuel Gas Co. set stakes for three new wells: No. 2 Amanda E. Robinson, Lots 11-12; No. 3-1,414 Loren C. Stocker, Section 9, and No. 4-1,413 J. C. Alloway, Section 10. Same company made a location for No. 1-5,83 I. J. Oldham, Section 3, Cambridge Township.

In Belmont County, Somerset Township, William C. McBride, Inc., is drilling on the Howell-Dement, Section 19, and Central Gas Co. is drilling No. 2 D. L. Hogan, Section 1.

In Morgan County, Marion Township, Bowman Oil & Gas Co.'s No. 4 C. M. Hoffman, Section 32, is an average gas well in the lower Berea from 1,606 to 1,618 feet, total depth 1,623 feet. In Penn Township, Ohio Fuel Gas Co. has an average gas well in No. 2-027 A. W. Embree, Section 16, in the lower Berea from 1,513-32 feet, total depth 1,538 feet. No. 3-5,106 is a new location on the same farm.

INDIANA

All completions reported from Indiana were located in the southern portion of the State, where activity is being renewed of late, mostly by Kentucky operators being just north of the Owensboro, Ky., field.

Thomas Seitz and others struck an unusually good producer on the Adolph Grass farm in Grass Township, Spencer County, which produced 60 bbls. initially from the Jackson sand, around 750 feet deep. In the same county the Packard Oil Co.'s No. 4 Lee Carlton, Section 19, Huff Township, shows very light, possibly good for a barrel a day, while No. 5 on the same lease produced 18 bbls. the first 24 hours from the Jackson sand at 745 feet. Missouri-Kansas Pipe Line Co. is drilling for gas on the M. Apayd farm, Section 25-5-5, same county.

In Perry County Roger E. Williams and others' test on the John Backer farm, near Troy, produced 8 bbls. in 24 hours from the Paoli lime formation. Conyers, Roetzel & Bugg's second test on the Frank Delaisse, Section 25, Clark Township, produced 240,000 feet of gas. The Ohio Oil Co. is reported to have found a dry hole on the Victor James, Section 36, Clark Township, near the town of Bristow, same county, and is drilling on the Alfonso Dupoint, Section 7-5-2. A. F. Green and others are drilling a test on the August Braunecker, east of Troy, same county.

Petroleum Exploration Co. is drilling on the Claud E. Kinzer in Monroe County. In Dubois County the Hoosier Drilling Co. is drilling on the Mrs. Henry Longbrake farm, near Zora.

ILLINOIS

Few completions are reported from the Illinois Field. In the Casey Field in Parker Township, Clark County, Carper, Hardway and others drilled a dry hole in No. 1 well, 500 feet to the south line and 50 feet from the west line of the S. Inman, SE SW Section 15, at a depth of 454 feet, and is the first well drilled in the old shallow area for a number of years.

J. D. Toomey and others' No. 15 in the NE cor. of the Highsmith Brothers farm, NE Section 20, Honey Creek Township, Crawford County, pumped but 2 bbls.

Joe S. Young, Jr., and others' No. 10 well, 200 feet from the north line and 850 feet from the east line of the Collison heirs farm, NW Section 13, Wabash Township, Wabash County, was dry at 1,478 feet.

In the shallow Trenton sand area, in Sugar Loaf Township, St. Clair County, at and around Dupo, the Ohio Oil Co.'s No. 7 well, 300 feet from the south line and 1,320 feet from the east line of the Phillip Frye, SW NW Section 34, pumped an initial of 40 bbls. from 641 to 701 feet. Hugo and others No. 1 on the Stein property at East Carondalet, same county, pumped 2 bbls. at 518-47 feet.

In the Bridgeport Field, Bridgeport Township, Lawrence County, the Ohio Oil Co. abandoned Nos. 21, 29, 30, 33 and 37 W. C. Miller, NW Section 20. Same company did the same with No. 7 D. P. Stoltz No. 1 farm, SE Section 2, Petty Township, also No. 7 William Seed No. 1 farm, Section 22, Dennison Township, which produced a great many years from the shallow Buchanan sand.

KENTUCKY-TENNESSEE

(Continued from Page 76)

15 on the C. H. Greer 187 acres, Deanfield area. The Ohio Oil Co. is drilling No.15 on the W. B. Kelley 105 acres, same field.

Daviess County

Only three wells are reported from the Owensboro Field of Daviess County, the best being the Leeper Oil Co.'s No. 3 on the R. H. Blackerby 40 acres, in the Maxwell area, which produced 45 bbls. initial from a depth of 920 feet. Hunt & Crow's test on the J. R. Walker, in the Jones Pool, southwest of Whitesville, pumped but 5 bbls. initial. The Ohio Oil Co.'s No. 1 on the P. C. Brown farm, is reported a dry hole. Close to 30 strings of tools are working in Daviess County at this time.

Henderson County

In Henderson County, mostly in the Niagara Field, five completions were made, but the field was hard hit on account of four being dry holes and one gas well. The gas well was drilled by the K. M. Dole Drilling Co. on the Henry Fryer farm, with a volume of 600,000 feet, the second well drilled in the lease.

Creek Drilling Co.'s test on the W. C. Cooper farm, in the Niagara Pool, for which a nice sum was paid as bonus, came in a duster. Johnson Oil & Refining Co.'s No. 1 on the Lewis Kerr, same pool, was a dry hole. H. O. Keener and others got another in No. 1 Nora Crowder farm, and Iley Browning, well known geologist of Ashland, Ky., drilled a duster on the Ivo Griffin farm, also in the Niagara Field. Henderson and McLean Counties are both getting a nice play and it will not be long until the Webster County area will be busy, being just a short distance south from the Niagara Field, and around Sebree, in Webster County, where considerable gas has been found in the past.

Field Pickups

In eastern Kentucky, Clay County is beginning to attract attention for its gas. The Petroleum Exploration Co. is drilling No. 1 on the Begley Coal Co.'s 1,553-acre block, and same company made location for tests on the Thomas Spurlock, General Spurlock, Green Ferguson and N. W. Rawlings farms, same county. Same company is starting No. 5 on the Warfolk Land Co.'s farm near McKee, in Jackson County.

Leasing activities are reported in the southwestern part of Kentucky where a heavy play for natural gas will be made.

CALIFORNIA FIELDS

(Continued from Page 62)

tion of the field where a drilling campaign has been under way for several months.

The Los Cerritos district, which is practically all town lot acreage, was the scene of a wild scramble for oil about four years ago, when many operators drilled to the 5,700-foot zone, getting big production for a few weeks, but being disappointed in the long run. This district now is showing considerable promise at depths between 6,500 and 6,600 feet. There are 8 or 10 wells either drilling there at present or making preparations to get under way. Among the companies interested are General Petroleum, Texas, Wilshire and several small independent operators.

Midway-Sunset

The Belridge Oil Co. has killed its No. 15, a deep test in the North Belridge Field of Kern County, and will deepen it in search of more substantial production. This well was brought in several weeks ago doing about 200 bbls. of 55 gravity oil and approximately 3,850,000 feet of natural gas per day from 5,088 feet, but failed to hold up. It is believed that another few hundred feet of hole will change this small producer into a large well as the Temblor formation was really only scratched when the company decided to make a production test. If this well subsequently develops large production comparable with Kettleman Hills this area should become an important factor in future production, notwithstanding that the acreage is held in large blocks.

It is generally understood that regardless of the outcome of this well the Belridge Oil Co. will drill additional wells. Two wells were put on production in the Fruitvale Field this week, although both of them were relatively small. No. 1 Moore of the Shell was good for 294 bbls. daily from 4,072 feet, while the Mohawk's No. 6 in Section 27-29-27 made 100 bbls. initially from 4,183 feet. The Doyle Petroleum finished a 750-bbl. well out in the Maricopa Flats section of the Midway-Sunset Field when No. 8 Son Crail was completed at 3,518 feet. This well has not yet entirely cleaned up, the usual sand trouble being encountered, and may show a much larger production after it gets under way. The Rio Grande Oil Co.'s No. 5 Havenstrite came in a few days ago flowing at the rate of 700 bbls. per day from 3,390 feet but subsequently sanded up and the crew is at the present time cleaning out the bridge and should have this well back on production again shortly.

Drilling Decreasing at Kettleman Hills

There were no developments of specific importance in the Kettleman Hills Field of Kings County during the week as drilling operations in conformity with the Kettleman Hills agreement are getting smaller with each succeeding week. There are six wells producing in the north dome at the present time, the aggregate output during the past 24 hours being 16,345 bbls. of crude oil and 467,025,000 feet of natural gas. The Continental's No. 8 Elliott is producing 3,925 bbls. of 61.9 gravity crude and 130,050,000 feet of natural gas daily. No. 1 Felix of the Petroleum Securities is making 1,060 bbls. of 60.5 gravity oil and 26,750,000 feet of natural gas every 24 hours.

The Milham's discovery well is flowing 3,050 bbls. of crude and 75,000,000 feet of natural gas daily. The Standard's three producers, No. 38 in Section 35-21-17, No. 8 in Section 1-22-17 and No. 81 in Section 11-22-17, are producing 2,130 bbls. of crude oil, 58,400,000 feet of natural gas, 3,370 bbls. of crude and 88,625,000 feet of natural gas and 2,810 bbls. of crude and 88,200,000 feet of natural gas, respectively. Drilling operations have been showing a consistent increase in the Mount Poso Field of Kern County during the past few weeks and a check indicates that several more projects are scheduled to get under way shortly. Additional work is also getting under way in the Round Mountain Field, although drilling in this field is being retarded because of the fact that most of the productive acreage is held in large blocks.

The General Petroleum successfully finished another new producer in the Capitan Field of Santa Barbara County when No. 4 Erburu, a new well, was brought in flowing 280 bbls. daily from 1,384 feet. The Barnsdall and Rio Grande have severely pinched back No. 6 Doty, a recent completion in the Elwood Field, and this new well, which showed an initial of 1,750 bbls. of clean 36.1 gravity oil daily from 3,615 feet, has been reduced to 960 bbls. per day. The General Petroleum recently killed No. 2 Ferguson, a tideland project in the Rincon Field of Ventura County, and has started redrilling and deepening it in search of deeper production.

CANADIAN FIELDS

(Continued from Page 58)

president and managing director, J. C. Dallas; secretary-treasurer, P. M. Render; directors, Sir Francis Price, Col. A. W. Pryce-Jones, Dr. L. A. Maxwell, A. G. Clarke, F. C. Birks. English capital is largely interested, and rumors were current last year that the expansion of Calmont operations was the result of arrangements with the Shell interests. J. C. Dallas, managing director, was in London, England, at the time of the strike. The Dallas tract, on which Calmont's No. 2 was drilled, carries 15 per cent royalty which is shared by United Oils, Ltd., and Alberta Pacific Consolidated Oils, Ltd.

On the same acreage, Calmont Oils' No. 4, standing cemented for some time at 3,797 feet, is resuming work. Calmont's No. 6 is standing cemented at 3,770 feet, and No. 7 is drilling at 4,339 feet. No. 8 is standing cemented at 1,602 feet and No. 10 is drilling at 1,604 feet. No. 11 is drilling at 472 feet and No. 12 rigging up. Calmont's No. 1, LSD 2, Section 1-20-3w5, in the central section, is drilling 107 feet in the lime at 5,561 feet, and No. 3, same LSD, is standing cemented at 1,585 feet. In the North Turner Valley, Calmont's No. 5, LSD 3, Section 34-20-3w5, is standing at 3,900 feet, and No. 9 formerly Seneca's No. 1), LSD 1, same section, is shut down after cleaning out to 4,663 feet.

Regal Deliveries Decline

Deliveries from the Turner Valley Field to Regal Oil & Refining Co. in April showed a decline from March figures, being 9,361 bbls. compared with 12,630 bbls. The decline was chiefly due to freezing of Okalta Oils' No. 1, though the McDougall-Segur, McLeod and Spooner wells all showed a falling-off. Regent Oil Co.'s No. 1, which has heretofore delivered production to Imperial Oil, Ltd., started deliveries to the Regal company in April.

Imperial Drilling

The latest progress report by Imperial Oil, Ltd., shows several tests drilling in the lime. Mayland Oil Co.'s No. 1, Baltac Oils' No. 1 and Royalite's No. 16 are all definitely on production from the lime, and are all small wells, though no figures have been given out officially.

At the recent annual meeting of the Royalite Oil Co., R. B. Bennett withdrew from the directorate, J. H. McLeod, western production manager of Imperial Oil, Ltd., being named to succeed him. Other officers elected were: Vice president, Alexander Hanna; secretary-treasurer, chairman of executive, A. M. McQueen; directors, A. E. Cross, C. M. Moore. Dalhousie Oil Co., another Imperial subsidiary, elected the following officers: President, A. M. McQueen; vice president, Alexander Hanna; secretary-treasurer, B. E. Walton; directors, J. H. McLeod, Alick Newton, Nat Christie. It is understood that Royalite Oil Co. will start some additional drilling this season, but that Dalhousie Oil Co. will complete its No. 7 well before undertaking testing of its other acreage.

South Turner Valley

In Section 20-19-2w5, South Turner Valley, several tests are drilling in the lime. Alberta Pacific Consolidated's No. 2, LSD 5, got a second strong show of gas 610 feet in the lime at 5,742 feet depth. Production test indicated crude naphtha recovery around 240 bbls. a day, but the hole is being cleaned out and deepened. Wellington Oils' No. 1, LSD 1, is cleaning out ice bridge above the lost tools to bring back the production at 4,915 feet; initial flow was estimated 20,000,000 feet a day. Freehold Oil Corp.'s No. 2, LSD 8, is deepening in the lime at 4,320 feet after striking some wet gas.

Central Turner Valley

In Section 12-20-3w5, Central Turner Valley, British Dominion Oil Development Corp.'s No. 3, LSD 6, is drilling below 410 feet. British Dominion's No. 2 delivered 3,099 bbls. of naphtha in April, and has produced 13,764 bbls. of naphtha and light crude since it was completed at the end of January.

In Section 13-20-3w5, Spooner Oils' No. 4, LSD 14, 400 feet north of No. 2 producer, has spudded in, and is drilling below 50 feet.

In the North Turner Valley, Model Oils' No. 1, LSD 8, Section 22-20-3w5, produced 2,717 bbls. of naphtha in 25 days, and is now making 114 bbls. daily average. Deliveries are made to Imperial Oil, Ltd.

Imperial Oil, Ltd., through its various subsidiaries, will, it is understood, continue exploration work in the Turner Valley and various other Alberta fields. Some new acreage in the Turner Valley will likely be tested in the hope of finding a source of heavier crude. The company has not found it economical to ship Turner Valley naphtha farther east than Regina, Saskatchewan, owing to the distillate rates charged on freight shipments. An experimental shipment to the Sarnia refinery was found unprofitable. Under recent Alberta legislation the company will sell the raw product direct from the wells, although it is not recommended for use in this form, the company continuing its policy of importing heavier stock to blend with the high gravity Turner Valley naphtha.

Deep Crude Possibility

In connection with the search for a normal crude oil, some attention is being given to the possibility of exceptionally deep drilling in the proven Turner Valley Field itself. Recently some German geologists were reported studying the possibilities, and experiments and investigations have been carried on by other interests. In the early days of the field many operators believed the light crude of the present upper horizons was derived from a large body of heavier crude at greater depth, and the drilling of a deep test was strongly advocated more than 10 years ago by A. W. Dingman and other pioneers of the field. When the Royalite Oil Co. was formed this deep test was undertaken as Royalite's No. 4, but the calculations were entirely upset when the supposedly barren Madison limestone underlying the light crude horizons produced, not heavier crude, but wet gas and high gravity naphtha.

That this naphtha may in turn be derived from an enormous body of heavier crude, possibly in the Devonian limestone, is now the theory, and it is thought that such a reservoir can be reached in 9,000 feet of drilling. The geologically deepest test yet drilled reached around 6,250 feet, though a test off structure was drilled 6,600 feet. A second horizon in the lower Madison produced crude naphtha, so that the drill would probably have to go below the Madison to get the supposed reservoir. Some geologists, however, hold to theory that the naphtha is a product of lateral filtration from the same geological horizon rather than by filtration through faults from a lower formation.

Foothills Tests in Lime

On the Highwood structure, south of Turner Valley, the chief center of interest is Western Alberta Oil Co.'s No. 1, LSD 11, Section 7-17-2w5, which is drilling 323 feet in the Madison lime at 3,455 feet. Cores show some saturation of green oil, and the well is making some gas. There is apparently no indications of the faulted conditions which Imperial Oils' No. 1 Highwood, in LSD 3, Section 36-18-3w5, north and west of Western Alberta's No. 1, encountered only a short distance in the lime.

Sarcee Test Projected

An important wildcat test is planned by Sarcee Oil & Development Co. of Calgary, to be drilled on the Sarcee Indian Reserve near that city. The Sarcee company is a subsidiary of Highwood-Sarcee Oils, Ltd., which controls extensive acreage on the Highwood structure, A. W. Dingman, pioneer Alberta oil operator, being president of both companies. One section of the Highwood-Sarcee holdings has been optioned to Imperial Oil, Ltd., while the other will be developed by the Sarcee Oil & Development Co. Extensive core drilling operations have been carried on by the latter as a preliminary to its commercial test. Comparatively shallow drilling on the Sarcee Reserve many years ago secured some wet gas production.

On the Herron structure, Herron Petroleums' No. 1, LSD 3, Section 13-22-6w5, got a small gas strike and traces of oil around 550 feet. This is the fifth test in the foothills to get the Madison horizon, which is the main producing horizon of the Turner Valley Field. The nearby Moose Dome test, started in the Madison and got the Devonian lime at 550 feet.

On the Morley Reserve, Wabash Oils' No. 1 is standing at 3,066 feet with intermittent bursts of gas, but no commercial production.

Red Coulee Field

In the international Red Coulee Field, Cosmos Petroleum Co.'s No. 1 Thacker, Section 2-37-4w, produced 6,021 bbls. in 18 days of April, and for a while was flowing around 365 bbls. a day under its own head. Production, delivered to the Maple Leaf pipe line, commands $1.65 a bbl., and it is estimated that at this rate the well will pay for itself in 60 days. Since starting to pump, production is reported somewhat increased, to around 420 bbls. It is claimed production comes from a true quartz sand around 2,558 feet. Drilling equipment has been dismantled and is being rigged up for Cosmos' No. 2, same section, a quarter mile west. Hannah Porter Oil Co.'s No. 1, SE, Section 2-37-4w, offsetting Cosmos' No. 1 a quarter mile south, has spudded in. Rice & Radigan's No. 1, SW, Section 1-37-4w, has spudded in. Monalta Oil Co.'s No. 3 Buckley, Section 1-37-4w, is rigging rotary outfit.

On the Alberta side, Commonwealth Petroleums' No. 1, LSD 10, Section 3-1-16w4, is again drilling at 2,215 feet with 10-inch casing cemented at 2,100 feet. The test is logging with the Vanalta producers and should be the next completion.

Some new locations have been made recently. Russell V. Johnson has spotted No. 1 test for Celtic Oil Co. in SW SW, Section 17-1-16w4. Loren Petroleums' No. 1 has location in Section 1-1-16w4 in the northeastern section of the field, and is planning to start drilling in June. At the northwest end Petroleum Holdings Co., headed by O. G. Devenish of Calgary, has secured 400 acres from Earl A. Grant in the northwest end of Township 1-17w4 and will likely drill No. 1 test in Section 29. Sampson Oil & Development Co. has been organized with office at Calgary to develop acreage in Sections 7-1-16w4, 21-1-16w4 and 16-1-17w4. John H. Braseth and A. H. Mayland are among the backers.

On the Montana side, Ohio Oil Co.'s No. 1, NW SW, Section 2-37-4w, is rigging up a quarter mile west of Cosmos' No. 1. Askalta Oils, Ltd., of Calgary, has location for a cable tool test a mile south of Cosmos' No. 1.

Water Precautions Urged

Directors of the Alberta Oil & Gas Association have taken up with the Rocky Mountain Oil & Gas Association the matter of precautions against water intrusion in the Red Coulee Field, with a view to adoption of a uniform policy.

Border Fields

In the Skiff Field, Devenish Petroleums' No. 4, LSD 13, Section 29-5-14w4, has spudded in, and is drilling below 100 feet.

In the Milk River district, Commonwealth Petroleums' No. 1, LSD 9, Section

9-3-15w4, is at 3,920 feet with continued shows of gas and oil.

On the Montana side, Sunburst-Watfords' No. 1, drilling a west offset to the discovery in the Bears' Den Field, Sweetgrass Hills, is drilling below 2,000 feet with small shows of oil and gas. Location is just south of the Alberta boundary.

Dinton Ridge Oils, Ltd., has been incorporated under Dominion charter by residents of Blackie, Alberta, to drill on the Dinton Ridge structure east of that town. Officers are: President, William Laycroft, Jr.; vice president, Thomas Hatche ; secretary-treasurer, Ed Wellman; directors, Albert Swartz, C. L. Roebuck, E. M. Macdonald, Joe Laycroft. J. O. Melmoth Williams is geologist. No. 1 test will be drilled on the William Laycroft farm.

Wainwright Field

In the Wainwright Field, east central Alberta, Lloyd's Petroleums' No. 1, LSD 12, Section 6-45-6w4, has derrick up and some equipment in place. Location is about a mile northwest of Wainwright and S. J. Keenleyside of Vancouver is in charge. Oil Selections' No. 1 Shewchuck, LSD 13, Section 2-46-7w4, is practically rigged up for a test of an interesting new section of the field. Senator Oil & Gas Co.'s No. 1, Section 23-44-6w4, has derrick up about 6 miles east of Wainwright; W. W. Booth, formerly of California, is in charge. Palmer Oils, Ltd., is reported preparing for a test in LSD 14, Section 18-44-2w4, near Chauvin. Thomas Rawn and associates are organizing a company to develop Wainwright acreage. Daugherty Petroleums' No. 1, LSD 4, Section 28-46-6w4, has derrick up and equipment unloaded for a test just east of Wainwright.

Ribstone Field

In the Ribstone Field, east of Wainwright, Meridian Oils' No. 1 producer, Section 16-45-1w4, is pumped intermittently. It is claimed the well is good for 100 bbls. a day. Imperial Oils' No. 2 Ribstone, LSD 14, Section 9-45-1w4, is down 1,322 feet; a strong show of oil and considerable gas was met in a stray sand at 1,125 feet. Monitor Oils' No. 1, Section 20-46-1w4, is reported working on derrick. Triton Oil Co.'s No. 1, NW. Section 11-46-1w4, is planning to start work this month.

British Columbia

In the Flathead Valley, British Columbia, Akamina Valley Oil Co.'s No. 1 has derrick completed and is arranging to drill this spring.

Ontario Fields

A statement recently issued by Petrol Oil & Gas Co. of Toronto states that the company's two Trenton wells in Dover Township, Kent County, are maintaining satisfactory gas production.

In Brant County, the Petrol company is continuing development work on the Six Nations Indian Reserve. Completions last season brought the total of wells up to 18, of which only one failed to prove a commercial producer. Two new tests have been started. The company holds 43,696 acres in the Brantford area. The field is a shallow gas proposition, production being delivered to the Dominion Natural Gas Co. The Petrol company recently subleased 7,000 acres to the Ajax Oil & Gas Co. of Toronto on a royalty basis, the arrangements calling for 10 wells to be drilled this year. The first test will be started this month.

In Raleigh Township, Kent County, American Engineering Co.'s No. 2 has started work just west of No. 1 gasser, on the lake front. In Dover Township, Acme Gas & Oil Co.'s No. 3 is pulling pipe after finishing dry in the Trenton limestone.

ROCKY MOUNTAIN AREA

(Continued from Page 58)

1,000,000 feet of gas at 2,885-90 feet. Flynn, Welch & Yates' No. 2 Stevens, NW NE SW, Section 13-17-30, is bottomed at 3,250 feet and fishing for two strings of tools. It had 1,500 feet of oil in the hole when the tools were lost. L. M. Lockhart and others' No. 2 Wooley, NE cor., Section 28-17-30, has been completed. It had pays at 3,095 and 3,535 feet and encountered sulphur water at 3,560-63 feet. It was then plugged back to 3,535 feet and is pumping an average of 22 bbls. per day. Leonard & Levers' No. 3 State, NW SW, Section 21-17-29, is drilling at 1,400 feet and Henderson, Dexter & Blair's No. 1 Grier, SW NW, Section 21-16-31, is drilling at 2,930 feet.

Maljamar Area—Lea County

The Maljamar Oil & Gas Co.'s No. 3 Baish, NE NW, Section 21-17-32, is cementing pipe at 2,850 feet.

Jal Area——Lea County

The Midwest Refining Co.'s No. 34 Farnsworth, SE SE, Section 13-26-36, is drilling at 500 feet in sand.

Southwest Area—Eddy County

Hammond & Turner's No. 1 Kissinger, Section 13-18-25, west of the Pecos River, is shut down at 865 feet, and the same firm's No. 1 Wilson & Gossett, Section 26-17-25, has commenced drilling. F. B. Van Horn's No. 1 Santa Fe, SE SE, Section 18-19-26, is drilling at 2,100 feet, and R. D. Compton's No. 1 State, SW NW, Section 2-20-25, is shut down at 1,790 feet.

Chaves County

Warman Oil Trust's No. 1 Seibert, NE, Section 27-13-24, is shut down at 1,195 feet.

De Baca County

The Matador Oil Co.'s No. 1 Wood, SW SW, Section 6-4n-20, is drilling at 2,690 feet and carrying the 8¼-inch at 2,684 feet.

McKinley County

The San Juan Coal & Oil Co.'s No. 1 Santa Fe, SE SE, Section 27-18-9w, is shut down at 2,110 feet.

San Juan County

The Dorothy Oil Co.'s No. 2 Goede, NW SE, Section 29-30-9, Blanco district, is drilling at 1,320 feet. The Southern Union Gas Co.'s No. 1 Day, SW cor., Section 20-28-10, Kutz Canon, is shut down at 1,410 feet, and the Reserve Oil Co.'s No. 2 Shaffer, SE NE, Section 1-21-14, Stony Butte, is shut down at 780 feet.

UTAH

The two active operations in Utah are both reaching interesting stages. The Utah Southern Oil Co.'s No. 1 State, SW SE, Section 26-21-23, Cisco district, is drilling in the Wingate formation near the top of the red beds, at 2,050 feet. Depth to the top of the objective Pennsylvanian horizon is estimated to be 2,300 feet. This is a test of the shore lines of the eastern Utah salt basin, and the Pennsylvanian formation is expected to be largely shales and sands. The test wells previously drilled in eastern Utah have been out towards the center of the old salt basin as is evidenced by the continuous lime and salt which have made up the Pennsylvanian section. The Midwest Refining Co.'s No. 31 Pary, SW SE, Section 14-39-1w, Kane County, for the account of the Utah Oil Refining Co., is drilling at 3,745 feet in buff colored lime. It is 270 feet in the Kaibab formation. It had a good show of oil with sulphur water in the top of the Kaibab at 3,370 feet, the water rising 700 feet in the hole. The 10¾ was cemented at 2,791 feet.

COLORADO

Bent County

The Continental Oil Co.'s No. 1 Pipe Springs, NE cor. SE, Section 27-17-49, the deepest test so far drilled in southeastern Colorado and the second deepest hole in the State, is drilling below 6,015 feet in sandy lime and showing some salt water. The water was found below a bed of granite wash encountered around 5,900 feet. The hole is bottomed 2,300 feet below the top of the Pennsylvanian formation and has cut a number of water-bearing or dry sands, but no important showings have been encountered. It is understood the operation will continue as long as the drilling is good as the well is yielding some important data concerning subsurface geology in that area. This well is only 18 miles northeast of the Marland Oil Co.'s No. 1 Mesa, SE NE, Section 8-30-50, Baca County, which was abandoned at 2,085 feet in 1928 in dolomite.

Arapahoe County

The McDeb Drilling Co.'s No. 1 Fitzsimmons, NE, Section 7-4s-66, is drilling below 5,466 feet in hard and sandy shale and is reported making some small shows of oil and gas. The 6¼-inch is being carried close behind the tools. H. Brown Cannon and others' No. 1 Shaffer, NE SE, Section 21-4s-67, is bottomed at 790 feet and pumping water to test a show of oil and gas. This well was spotted with a doodlebug which the operator declared indicated an oil sand at 750 feet. At that depth it encountered a hard sandstone below which either oil or water was expected. It appears to have a little of both and an effort is being made to shut off the water.

Adams County

Nettie M. Slatt's No. 1 Hills, SE cor., Section 27-3s-64, is drilling at 1,365 feet. The 12½-inch was cemented at 1,300 feet.

Larimer County

The Standard Oil Co. of Colorado's No. 1 Hertha, NW cor., Section 21-4n-69, Berthoud Dome, has been temporarily completed at 2,830 feet. After setting the 8¼-inch at 2,810 feet and drilling out the plug, the hole gauged 1,500,000 feet of gas from the Nio-Benton formation. It probably will be carried down to the Dakota sands at a later date. It is an offset on the south to the Five Square Oil & Gas Co.'s No. 1-A State, which stopped last year at 3,781 feet, 52 feet in the Muddy formation. It is flowing around 18 bbls. per day through the 6¼-inch casing, never having been completed. The Contiuental Oil Co.'s No. 5 Scott, NE NW, Section 6-9n-68, Wellington Dome, is drilling in at 4,306 feet, but it is not yet known what it will make. The top of the Muddy sand was at 4,300 feet where the 6¼-inch was set.

Morgan County

The Indian Territory Illuminating Oil Co.'s No. 1 State, C NE NE, Section 16-1n-57, on the Fort Morgan anticline, is drilling below 900 feet. This operation is looked upon as one of the most importat wildcats ever drilled in northeastern Colorado as the company is determined to make a real test of the structure which has been known for several years and is considered one of the most likely structures in the Dakota formation in that area.

Yuma County

The Phillips Petroleum Co.'s No. 1 Andrews, NW NW, Section 3-2s-42, on the Rosenkrantz structure, which is testing deeper horizons than those to be explored in the Indian Territory company's well, is bottomed at 5,050 feet and underreaming the 6¼-inch. It is supposed to be near the base of the Pennsylvanian.

Weld County

The Platte Valley Petroleum Co.'s No. 1 Patterson, SW SW, Section 24-6n-61, Greasewood Dome, has reached a depth of 5,800 feet and is believed to be in the bottom of the Pierre shale. Samples of the cuttings have been sent to Oklahoma for analysis to determine definitely the horizon being drilled. This well has been showing gas for some time. The quantity coming up in the bailer is sufficient to make a flame 4 to 5 feet high when ignited, but not enough to force its way through the column of water being carried.

Boulder County

The Reliance Oil Co.'s No. 1 Erickson, NE NW, Section 33-2n-70, in the center of the old Boulder Field, is drilling at 3,136 feet. It had a flow of hot sulphur water at 2,878-2,910 feet, at which horizon tests in that immediate vicinity have heretofore stopped without going on down to the Dakota.

Jackson County

The Midwest Refining Co.'s No. 21-X Rich, SW NW, Section 9-6n-80, Buffalo Creek, is making new hole after being shut down for the winter and is drilling at 3,395 feet in gray sand. The 8⅝-inch is being run at 3,378 feet. The Producers & Refiners Corp.'s No. 1 Hendershot, SE NE, Section 2-6n-81, Pole Mountain, is drilling at 3,677 feet in sandy lime. The 10-inch was cemented at 2,729 feet.

Fremont County

The Continental Oil Co.'s No. 4 San Isabel, NW SW, Section 22-20-69, in the south extension of the Florence Pool, is bottomed at 2,010 feet and making a bailing test of an oil show before drilling deeper.

Garfield County

The Fulton Petroleum Co. is moving in for its first well on the Garmesa Dome, located in the NE NE, Section 8-8s-102. It is about one-fourth of a mile east of the Sun Oil Co.'s No. 1 Smith, a large gasser completed several years ago. The Fulton company has franchises to supply Grand Junction and other towns in the Grand Valley with natural gas.

Rio Blanco County

The White Eagle Oil & Refining Co.'s No. 1-A Fordham, NW SW, Section 9-2s-96, Piceance Creek, is drilling at 3,940 feet and is still in the brown shale of the Green River formation. It continues to make considerable gas. The Texas Production Co.'s No. 1 Potter, NE SW, Section 30-2n-96, White River, is still fishing for string of fishing tools 900 feet down from the top. Total depth is 5,948 feet.

Moffat County

The Midwest Refining Co.'s No. 19-8D Parkinson, SW NE, Section 22-4n-92, Iles Dome, is drilling at 3,084 feet and making slow progress due to the large quantity of water from a sand in the Dakota series. The Sundance is the objective. The Midwest's No. 24 Hannewalt, SE SE, Section 4-6n-92, Bell Rock, is drilling at 2,495 feet. The Texas Production Co.'s No. 12 Knowlton, SW SE, Section 33-5n-91, Moffat Dome, has suspended indefinitely after completing rig. In the meantime the company has gone back into its No. 6 Knowlton, SE cor., Lot 8, Section 10-4n-91, an old producer in the Dakota and is deepening it. It is drilling at 4,268 feet. Keoughan, Myers and others' No. 1 State, NW SW SW, Section 16-4n-101, Midland Ridge Dome, a test of the Pennsylvanian and Madison limes, commenced spudding May 1 and is drilling at 200 feet. The Texas Production Co.'s No. 1 Berlin, SW NE, Section 19-12n-100, Bartram Dome, is preparing to resume drilling after setting the 6¼-inch. Total depth is 2,507 feet. There is considerable water in the hole.

IDAHO

The Grand Teton Oil Co.'s No. 1 Blevins, SW SE, Section 33-5n-44, Horseshoe Dome, Teton County, is bottomed at 2,460 feet and underreaming the 8¼-inch. Christian Vrang, associate geologist for the company, expresses the belief that the hole is still bottomed in the Frontier formation and that cuttings indicate it is about to enter the contact zone between the Frontier and Aspen. Same company's No. 1 Bevan, NW SE, Section 28-5n-44, is drilling at 1,800 feet in wet hole in the Frontier and showing rainbows and bubbles of gas. This well is 200 feet lower structurally than No. 1 Blevin, and appearance of showings is believed to indicate a faulted condition between the two wells. The Monida Oil Co.'s No. 1 Rose, NE, Section 32-14-36, Beaver Dome, Clark County, is resuming at 1,140 feet after being shut down for the past two months for repairs.

WYOMING

Carbon County

The Producers & Refiners Corp.'s No. 2 Mahoney Dome, SE NW, Section 34-26-88, joint with the Midwest Refining Co., is being swabbed for a test of production after plugging back from 4,760 feet to 4,695 feet to shut off bottom water, and shooting the pay. This well, the first to be drilled below the gas horizons in the Dakota and Sundance formations, discovered a new pay in the Tensleep of Pennsylvanian age. The Tensleep was topped at 4,600 feet and after setting the 6¼-inch on top of that formation, it was drilled to 4,683 feet where it made around 75 bbls. a day on a short production test. The oil tested 33.2 gravity, the highest for any crude found in the Tensleep in Wyoming. The hole was then deepened to 4,760 feet where it began to show water. Before the water made its appearance the well was flowing at the rate of 20 bbls. a day. The pay was very hard and tight and the shot is said to have materially increased the production, though no figures have been given out as to what it is making. The importance

of this discovery lies not only in the opening of a new horizon in southern Wyoming, but in the quality of the oil. The Mahoney Dome is a large structure about 7 miles long and the discovery in the Tensleep is on the western end of the anticline. The Producers & Refiners, the Midwest Refining Co., the Ohio Oil Co. and the Hughes Royalty Co. are the principal owners of acreage. It is probable several wells will be started shortly on this dome and that the results will lead to further exploration on nearby structures. The Producers & Refiners Corp. is going back into its No. 8, NE cor. NW, Section 7-26-89, on the Wertz Dome, which lies to the west and north of Mahoney Dome, and will make it into a Tensleep test. It was completed last year in the Sundance at 4,150 feet as an 80,000,000-foot gas well. Like Mahoney Dome, the Wertz Dome produces gas in the Dakota and Sundance and the prospects for encountering oil in the deeper horizons is considered very encouraging. The Midwest Refining Co.'s No. 31 Eades, SW cor. SE, Section 1-18-78, Dutton Creek, is drilling at 3,980 feet in dark gray shale and carrying the 8⅝-inch at 3,874 feet. The Producers & Refiners' No. 2 O'Brien Springs, Section 11-24-88, is drilling at 1,100 feet.

Fremont County

The Kinney-Coastal Oil Co.'s No. 1 Dykeman, SE SW, Section 22-3n-1w, Pilot Butte, is bottomed at 3,695 feet in the Fuson shale between the Dakota and Lakota sands and underreaming the 6¼-inch. This well gauged 63,000,000 feet of gas per day in the Muddy. After testing the Lakota, it is probable rotary tools will be installed to carry the hole on down to the Morrison and Sundance sands. The Texas Production Co.'s No. 1 State, SW SW, Section 36-34-95, Alkali Butte, is drilling at 3,330 feet. It had some gas at 3,217-22 feet followed by water. It is still several hundred feet off the first objective sand. The Producers & Refiners' No. 2, NW SE NW, Section 33-34-92, Muskrat Dome, is installing rotary at a depth of 532 feet. The 15½-inch was cemented at 380 feet. After bringing in a big gasser on this dome last year the company drilled a number of shallow holes to work out the structure and the well which is now resuming will be carried through the big gas, if possible, to search for oil in the deeper horizons. The same company's No. 10, Section 14-32-95, Sand Draw, is drilling at 1,710 feet. This well, also, is being drilled with a rotary in an effort to get through the heavy gas pressure. Several attempts to test the Dakota on this structure have failed on account of the heavy gas pressure in the Frontier.

Natrona County

One completion in Natrona County was reported this week in Mosher Oil, Inc.'s No. 1 Murane, SW, Section 3-39-79, in the southwestern shale area of Salt Creek. It was completed at 2,250 feet and is making 100 bbls. a day on the pump. The Midwest Refining Co.'s No. 29-DT, NW, Section 35-40-79, the Salt Creek deep test, is preparing to resume after cementing the 8⅝-inch at 4,313 feet. The Madison lime is the next objective. The Midwest Refining Co.'s test in the C NE NE, Section 23-35-79, Midway Dome, to be drilled under a co-operative agreement, is building rig. The Chicago Oil Co.'s No. 3, SW, Section 1-33-83, Poison Spider, an old well being deepened to test the Madison lime, which has never been explored on this dome, is drilling at 1,540 feet. The Madison is expected at around 3,400 feet.

Sublet County

The California Petroleum Co.'s No. 3-L, Section 34-27-113, La Barge Field, is drilling at 720 feet, and the Ogden-La Barge Oil Co.'s No. 1, Section 18-27-113, is resuming at 4,985 feet after being shut down for the winter. This is the deepest well drilled in that area. It was out of the Hilliard shale, which was 2,300 feet thick, at 4,800 feet. The 6¼-inch is on bottom. The Wall Creek sands are the objectives.

Uinta County

The California Co.'s No. 1 Union Pacific, NW NE NW, Section 7-17-116, Muddy Creek Dome, is being abandoned at a total depth of 4,815 feet. This well, which has an altitude of 7,211 feet, commenced spudding in a 22-inch hole in March, 1928, for a test of the Twin Creek, Nuggett and Thaynes formations, the latter being expected at 4,000 feet. The Twin Creek and Nuggett are of Jurassic age and the Thaynes is Triassic. A number of sands were cut, one of them being nearly 400 feet thick, but water was found in most of them.

Park County

The Midwest Refining Co.'s No. 31 Rosenberg, SW cor. SE, Section 24-58-98, Frannie Dome, is drilling at 1,450 feet in dark sandy shale, and its No. 36 Frannie Oil, SW cor. NE, Section 25-58-98, is redrilling at 1,668 feet. Old bottom was at 1,680 feet. The California Exploration Co.'s No. 2, NW NE, Section 14-48-102, Pitchfork Dome, is drilling at 2,267 feet and carrying the 8¼-inch at 2,231 feet. The Texas Production Co.'s No. 1 Freeman, C NW SE, Section 30-51-100, Oregon Basin, is spudding at 211 feet.

Big Horn County

The Producers & Refiners Corp.'s No. 3 Government, NW NW, Section 24-56-98, Garland Dome, joint with the Kinney-Coastal Oil Co., has killed a flow of approximately 8,000,000 feet of gas per day at a total depth of 4,234 feet, and ran 1,800 feet of 2½-inch tubing to fish for tools. The Ohio Oil Co.'s No. 1 Easton, NW NW, Section 33-56-97, Byron Dome, is entering the top of the Embar with rotary tools at 2,950 feet. This is a gas well being deepened to test the Madison lime.

Sweetwater County

The Prairie Oil & Gas Co.'s No. 75-A, Section 11-26-90, Little Lost Soldier, which cased off a heavy flow of oil in the Sundance to make a test of the Tensleep, which has been proven on the Mahoney Dome to the east, is reported to have encountered considerable oil in a new horizon at 2,828 feet, presumably in the red beds or the top of the Embar. The 8¼-inch was run and cemented to shut off the pressure and drilling to the Tensleep is being resumed. The last-named objective is expected at around 3,400 feet. The Little Lost Soldier structure has never been drilled below the Sundance.

MONTANA

An interesting well in Section 12-34-3 in the Sunburst Field is drilling after being shut down for the past winter. This is the well started last year by the Sunrise Oil Co. and recently taken over in a merger and now operated by the Montana Gas Co. This well is west of the Queen City Pool and may find another pool like that one.

In the Border Field five wells should reach the pay very shortly. These are all drilling about 2,000 feet and may be completed next week. Three new wells are starting, two on the Canadian side and one on the Montana side. Shipments of crude from the Border Field continue to go to Coutts and Sweetgrass through the two pipe lines of the Illinois Pipe Line Co. on the American side and the Maple Leaf pipe line on the Canadian side.

Rocky Mountain Production

Daily average pipe line runs from the various pools in the Rocky Mountain area for the week ending May 10:

WYOMING	
Salt Creek	26,070
Frannie	....
Big Muddy	2,060
Oregon Basin	4,720
Dutton	10
Elk Basin	750
Ferris	40
Grass Creek	2,110
Hamilton	660
LaBarge	1,860
Lance Creek	130
Lost Soldier	2,950
Osage	1,070
Poison Spider	1,060
Rock River	2,180
Rex Lake	....
Lander	560
Simpson Ridge	50
Teapot Dome	40
Greybull	....
Mule Creek	820
Total	47,140
MONTANA	
Cat Creek	1,180
Kevin-Sunburst	5,610
Pondera	2,350
Lake Basin	70
Total	9,210
COLORADO	
Moffat	993
Fort Collins	1,516
Florence	528
Iles	1,052
Tow Creek	410
Boulder	25
Rangley	50
Total	4,574
NEW MEXICO	
Hogback	440
Rattlesnake	437
Table Mesa	104
Artesia	655
Cap Rock (Maljamar)	737
Jal	1,435
Hobbs High	1,559
Getty	....
Lea	6,258
Miscellaneous (Lea County)	419
Total	12,044
Grand total	72,968
Grand total May 3	77,624
Difference	4,656

PANHANDLE FIELDS

(Continued from Page 66)

production was 115 bbls. with total depth 1,758 feet. T. F. Hunter's No. 1 Waggoner Brothers was dry and abandoned at 1,480 feet. C. P. Sheldon's No. 1 Moeller was dry and abandoned at 901 feet. Turman Oil Co.'s No. 18 Waggoner Brothers had oil show at 1,507 feet and at 1,519 feet, initial production was 65 bbls. with total depth of 1,597 feet.

Wilbarger County

Anderson and others' No. 1 George was dry and abandoned at 2,804 feet. Dixie Oil Co.'s No. 1-H Waggoner was dry and abandoned at 2,401 feet. Dixie Oil Co.'s No. 1-N Waggoner was dry and abandoned at 1,939 feet. Fain & McGaha Oil Corp.'s No. 19 Waggoner had oil show 2,305-23 feet, initial production 90 bbls., shot 5 quarts 2,305-23 feet, total depth 2,325 feet. Fain & McGaha Oil Corp.'s No. 25 Waggoner had oil show 2,290 feet, shot 30 quarts 2,290-2,306 feet, initial production 45 bbls., total depth 2,306 feet. The Texas Company's No. 2 Waggoner had oil show at 2,374 feet, initial production 50 bbls., total depth 2,388 feet.

Young County

Brihill Oil Co.'s No. 2 Robinson had oil show at 733 feet, initial production 22 bbls., total depth of well 739 feet. C. W. Clark's No. 1 Weinberg had oil show at 1,044 feet, initial production 322 bbls., total depth 1,071 feet. Dr. W. M. Cooke's No. 1 Edwards was abandoned at 150 feet. Cooper and others' No. 1 Junker & Benson had oil show at 1,025 feet and 1,069 feet; initial production 120 bbls.; total depth of well 1,080 feet, but was plugged back to 1,078 feet.

Cooper and others' No. 2 Junker & Benson had oil show at 1,060 feet, initial production 75 bbls., total depth of well 1,077 feet. Halmack Oil Co. and others' No. 5 Carpenter had oil show at 887 feet, initial production 20 bbls. with total depth of 901 feet. Hammon's No. 1 Keith was dry and abandoned at 805 feet. Hicket and others' No. 1 Gibbs was dry and abandoned at 927 feet. Hunter Oil Corp.'s No. 3 Benson had oil show at 1,067 feet, initial production was 100 bbls., total depth of well 1,081 feet. Hunter Oil Corp.'s No. 2-B Benson had oil show at 1,062 feet with initial production of well 140 bbls.; total depth 1,075 feet.

Hunter Oil Corp.'s No. 1 Bloadworth had oil show at 1,064 feet, initial production 111 bbls. with total depth of 1,074 feet. Hunter Oil Corp.'s No. 1 Leberman had oil show at 1,044 feet, initial production 585 bbls., total depth of well 1,074 feet. Independent Oil & Gas Co.'s No. 2 Lowe had oil show at 641 feet, initial production of 20 bbls., and a total depth of 646 feet. Lindsey Drilling Co.'s No. 1 Heatherly was dry and abandoned at 1,020 feet. Madden's No. 1 fee had oil show at 1,046 feet, initial production of 30 bbls., total depth of well 1,077 feet but was plugged back to 1,075 feet. Nimrod Oil Co.'s No. 3 Hall was dry and abandoned at 893 feet. Nimrod Oil Co.'s No. 1 Tucker was dry and abandoned at 1,108 feet. Panhandle Refining Co. and others' No. 2 Lowe was dry and abandoned at 727 feet. Perkins and others' No. 1 Cox had oil show at 1,048 feet, initial production 200 bbls., total depth of well 1,067 feet. Perkins & Cullum and Duniagan's No. 8 had oil show at 1,043 feet, initial production 155 bbls., total depth of well 1,078 feet. Perkins & Cullum's No. 8 Lemnrond had oil show at 721 feet, initial production 96 bbls., total depth of well 729 feet. Pennington's No. 3 fee had oil show at 686 feet, initial production 15 bbls. with total depth of 696 feet. Riggs' No. 3 Larimore and others had oil show at 697 feet, initial production of well 12 bbls. with total depth of 700 feet. Cunningham and others' No. 4 Kisinger, top pay 2,486 feet, initial production 115 bbls., total depth of well 2,509 feet. Hinson & Tidwell's No. 3 Grantham was dry and abandoned at 4,812 feet.

TEXAS PANHANDLE COMPLETIONS
Week ending May 11

Carson County

Empire Gas & Fuel Co.'s No. 23 Burnett had gas sand at 2,364 feet, initial production 42,000,000 feet of gas, total depth of well 2,582 feet.

Gray County

Adams Oil Co.'s No. 4 Morse, top of pay at 2,490 feet, shot 25 quarts from 2,490-2,600 feet, initial production 200 bbls., total depth of well 2,600 feet. Bob Dunlop's No. 4 Morse, top of pay at 2,606 feet, shot 300 quarts from 2,605-95 feet, initial production 300 bbls., total depth of well 2,695 feet. Shamrock Oil & Gas Co.'s No. 4-C Clayton had gas sand at 2,730-2,817 feet, top of pay 2,816 feet, initial production 675 bbls. and 7,000,000 feet of gas, total depth of well 2,825 feet.

Empire Gas & Fuel Co.'s No. 1-B Morse had gas sand at 2,590 feet, initial production 14,000,000 feet of gas, total depth of well 2,885 feet. McMan Oil & Gas Co.'s No. 8 Palmer, top of pay 2,860 and 2,885 feet, initial production 223 bbls., total depth of well 2,950 feet.

Hutchinson County

Phillips Petroleum Co.'s No. 2 Cheatham, top of pay 3,057 feet, initial production 1,040 bbls., total depth of well 3,065 feet. Phillips Petroleum Co.'s No. 1 Johnson (Juanita), top of pay 3,218 feet, total depth 3,221 feet, initial production 19 bbls. oil and 19 bbls. of water. Phillips Petroleum Co.'s No. 2 Johnson (Katz), top of pay 3,003 feet, total depth 3,013 feet, initial production 800 bbls. Phillips Petroleum Co.'s No. 2 Johnson (Margaret), top of pay 3,000 feet, initial production 625 bbls., total depth of well 3,009 feet. Phillips Petroleum Co.'s No. 1 Johnson (Royal), top of pay 3,004 feet, initial production 504 bbls., total depth of well 3,018 feet. The Texas Company's No. 5 Moore, top of pay 2,985 feet, shot 175 quarts from 2,985-3,076 feet, initial production of well 225 bbls., total depth 3,076 feet.

Wheeler County

Murchison & Fain's No. 12 Close was dry and abandoned at 1,418 feet. Murchison & Fain's No. 13 Close, abandoned. Prince & Adams' No. 2 Burchan had gas sand at 1,710 feet, initial production 23,000,000 feet of gas, total depth of well 1,920 feet.

RANGER COMPLETIONS
Week Ending May 11

Brown County

Ungren et al's No. 1 Harrell was dry and abandoned at 400 feet. Tex-Cal Oil Co.'s No. 2 McEntire had oil show 992 feet, initial production 30 bbls. with total depth of 996 feet.

Callahan County

Mid-Tex Oil & Gas Co.'s No. 1 Windham was dry and abandoned 1,656 feet.

Coleman County

Eppenauer's No. 1 Brooks was dry and abandoned 3,045 feet, had show oil 3,023 feet. Conner, trustee's No. 1 Kilpatrick was dry and abandoned at 1,452 feet.

Eastland County

Amyx and others' No. 1 Connellee was dry and abandoned at 1,500 feet. Elliott's No. 1 Liberty Land was dry and abandoned at 1,754 feet. Hopkins and others' No. 1 Ray was dry and abandoned at 2,040 feet.

Palo Pinto

McLester's No. 1 Wilber was dry and

abandoned at 1,780 feet. Texas Pacific Coal & Oil Co.'s No. 166 Stewart, top of pay 1,642 feet, shot 15 quarts from 1,642-65 feet, initial production 7 bbls., total depth of well 1,670 feet. Wickens and others' No. 1 Wilber, top of pay 3,030 feet, initial production 52 bbls. of oil and 25 bbls. of water, total depth of well 3,043 feet.

Stephens County

Chestnut & Smith's No. 1 Chesley was dry and abandoned at 3,897 feet.

Shackleford County

Morton and others' No. 1 Davis was dry and abandoned at 1,793 feet. Ritterbusch's No. 1 Nail was dry and abandoned at 1,340 feet.

Most Modern Methods Of Field Development In Use in Van, Tex.

SHREVEPORT, La., May 10.—Van, newest of Texas' producing fields, is likewise one of the most interesting in that part of the oil country because of the drilling practices of the Pure Oil Co. under the unit plan system, and because of its unusual surface appearance. The discovery coming as the sequel of six years of exploration was followed by quick development on a plan employing practices and equipment dictated by many years of experience, a knowledge of formations and adoption of mechanical and other devices invented for the conservation of equipment as well as production and the underground reserve.

Operators expect to see in an active field oil-stained derricks, greasy looking tanks and more or less waste oil soaking the ground. Not so in Van. It is a clean field in more ways than one. Having good elevation it is well drained and there is no collection of water to form mud holes, and drilling methods permit but a minimum waste of oil. It is clean, too, in the sense that the rough element characteristic of many flush pools is conspicuous by its absence. There are no barrel houses, no gambling joints, no "Shotgun Valleys" or "Pistol Hills." "Safety first" is the rule for the population as well as on the rig. Three Texas Rangers and many deputy sheriffs among the workers themselves assure this feature.

The Pure Oil Co. is in absolute control of everything within the proven area, where there have been 34 successful completions and approximately 20 to 25 wells drilling, the cost of operation being prorated among the five companies in the field according to their acreage. Not many of the wells are drilled on contract partly because the Pure would rather do its own drilling. Eighty-eight-foot steel derricks are usual, with twin boilers, twin engines, heavy and speedy draw works, and weight indicators, and most of the other tools and appliances of the scientific driller are among these ironclad requirements.

Six and five-eighths-inch drill pipe is commonplace and the rule is to set the surface string at 300 feet jacketed to the top. Crooked holes are guarded against by frequent use of the acid bottle which is run the first time when surface casing depth is reached and every 500 feet thereafter. If at any time the hole is found to be more than 5 degrees off the vertical the driller or contractor is required to plug back and straighten it out. After setting the water string, jacketed well up in to the surface string, the well is drilled in, using 3-inch stem thoroughly equipped with casing protectors and tubing is set with packer, all wells being produced through tubing instead of flowing through casing. They are allowed to flow just long enough to clean themselves of drilling fluid, and turned into the tanks as quickly as possible after oil shows in the pit. Similarly, there is no waste of gas, every foot of it not utilized for fuel is kept underground to prolong the flow life of the wells. Another means of effecting true conservation is the practice of keeping all producers pinched in to a degree calculated to keep them producing at a maximum compatible with maximum period of natural flow.

The company maintains a field staff of six paleontologists who run tower against each other as regularly as the drilling crews themselves, and never a core is taken that one of them is not present to watch it, grab the core out of the barrel, seal it in its box and ship it to field headquarters. No one else sees the core from the time it comes out of the hole until it is taken out of the box at these headquarters, but reports on it are available to those entitled to the information in a remarkably short time. Samples of cuttings similarly are taken every 10 feet, sacked by the driller and held for the arrival of the sample grabber, of whom there are two, also running tower against each other.

Van has the reputation of being the most scientifically operated, and closest to the ideal oil field of any in this part of the Mid-Continent.

SHREVEPORT GEOLOGISTS TO MAKE FIELD TRIP

SHREVEPORT, La., May 12.—The eighth annual field trip of the Shreveport Geological Society, in which geologists in Texas, Oklahoma and Arkansas are invited to take part, will be staged June 14 and 15 and will cover the outcrops of the Upper Cretaceous and Comanchean in Little River, Howard, Hempstead and Sevier Counties. The party will meet at the Grimm Hotel in Texarkana on June 13, leaving next morning at 8 o'clock in buses.

The territory to be covered is the subject of Bulletin 1 of 1919 of the Arkansas Geological Survey "Upper Cretaceous of Southwestern Arkansas," Carl H. Dane, and Bulletin 808 of the United States Geological Survey, "Caddo Gap Quadrangle," by H. D. Mizer. During the morning of the first day outcrops of the Arkadelphia marl, Nacatoch sand, Nacatoch-Saratoga contact, Marlbrook marl, Annona chalk, Ozan formation, Brownstone marl and the Tokio-Brownstone contact along the road from Texarkana to Nashville via Washington will be observed.

Nashville will be the luncheon stop and during the afternoon the Woodbine-Trinity contact, DeQueen limestone member of the Trinity and the Dierkes limestone and Paleozoic rocks along the road to DeQueen will be studied. DeQueen is the night stop and the society will hold its regular June meeting at the Barlow Hotel. The meeting will be devoted to a discussion of the day's developments and formations observed.

On the return trip the route will traverse outcrops of the Goodland limestone, Trinity-Woodbine contact, again the road traversing the Woodbine and Tokio formations, which are mostly covered with a mantle of pliocene gravels and sands; the Tokio sand member; Upper Tokio clay member and lower Brownstone; Upper Brownstone marl, Buck Range "sand" lentil, Ozan formation and Annona chalk.

WEST TEXAS FIELDS

(Continued from Page 65)

Arnold was dry and abandoned at 2,004 feet. Shell Petroleum Corp.'s No. 1-E University, top second pay 1,652 feet; initial production 100 bbls.; total depth 1,653 feet. Transcontinental Oil Co.' No. 2 Sellman was dry and abandoned at 2,111 feet.

Ward County

Atlantic and Dorrs' No. 1 Costley was dry and abandoned at 2,648 feet. Sid Richardson and others' No. 10 O'Brien and others had a show of oil had 2,553 feet, 2,585 feet, and 2,615 feet; initial production 185 bbls.; total depth 2,686 feet. Shell Petroleum Corp.'s No. 1 Owen and others, top of pay 2,886 feet; increased at 2,909 feet and 3,023 feet; total depth 4,415 feet; plugged back to 3,056 feet and shot with 75 quarts from 3,020-35 feet and shot again with 200 quarts from 2,890-2,930 feet; initial production 70 bbls.

Upton County

Texas Pacific Coal & Oil Co.'s No. 1 Belcher was dry and abandoned at 3,863 feet.

WILDCAT OPERATIONS IN TEXAS PANHANDLE

(Continued from Page 66)

Sweeney et al's No. 1 Locke, 164 ft. N and W, 40-ac. tr. along R.R. in Sec. 57, Blk. 7, I.&G.N. Sur. ..... Rig.

Texas Interstate P. L. Co.'s No. 1 Burnett, 1,320 ft. N, 660 ft. W, of W 480 ac., Sec. 99, Blk. 5, I.&G.N. Sur. .. Drlg. 1,890 ft.

Texas Interstate P. L. Co.'s No. 1 Sanford, C NW NE, Sec. 4, Blk. 3, A.B.&M. Sur. ..... Drlg. 2,185 ft.

L. W. Timm's No. 2 Garnet (White Deer), 330 ft. S and W, NE cor., Sec. 104, Blk. 4, I.&G.N.R.R. Sur. .. S.D. 3,140 ft; to P.B.

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 Slemmons, SW cor., Sec. 73, Blk. M-17, B.S.&F. Sur. ..... Rig blown down.

Mystery Oil Co.'s No. 1 J. L. Crum, SE cor. NE, Sec. 333, Blk. M-6, S.K.&K. Sur. ..... S.D. 510 ft. for csg.

CHILDRESS COUNTY

Continental Oil Co. and Sun Oil Co.'s No. 1 Johnson, 660 ft. NE, Sec. 580, Blk. H, W.&N.W. Sur. ..... S.D. 3,095 ft.

C. L. Sloane et al's No. 1 B. P. Smith, Sec. 49, F.P. Knott lands ..... T.D. 5,000 ft.; C.O.

COCHRAN COUNTY

Westbrook et al's No. 1 Slaughter, 400 ft. S and E, Labour 67, League 118, Knox County School Lands .. Drlg. 5,325 ft.

COLLINGSWORTH COUNTY

Shoupe Bros.' No. 1 Aldus, 410 ft. N, 330 ft. E, Sec. 96, Blk. 16, H.&G.N.R.R. Sur. ..... Show oil and gas 1,678 ft.; bailed estimate 10 bbls. first day from G.W. 2,194-98 ft; S.D. 2,401 ft; running 6⅝-in. csg.

Shoupe Bros.' No. 1 Whitson, 330 ft. N and E, SW, Sec. 33, Blk. 12, H.&G.N.R.R. Sur. ..... Spudded and S.D.

DONLEY COUNTY

Blue Bonnett Oil Co.'s No. 1 Ball, 1,075 ft. N line, 985 ft. E line, Sec. 22, Blk. E, D.&P.R.R. Sur. ..... T.D. 3,006 ft.; contract depth.

Marine Oil Co.'s No. 1 Sawyer, C SW, Sec. 5, Blk. G, G.C.&S.F. Sur. ..... S.D. 4,000 ft.

GRAY COUNTY

Baldridge & Lilley's No. 1 Melton, 330 ft. N and W, E½ SE, Sec. 95, Blk. B-2, H.&G.N.R.R. Sur. ..... U.R. csg.; T.D. 2,295 ft.

Cockrell-McIlroy Oil Co.'s No. 1 Castleberry, 330 ft. S and E, Sec. 126, Blk. 3, I.&G.N. Sur. ..... S.D. 3,280 ft; 800 ft. oil in hole; T.P. 3,263 ft.

Cockrell-McIlroy Oil Co.'s No. 1 Sallor, 330 ft. out of NW SW NE, Sec. 138, Blk. 3, I.&G.N. ..... Drlg. 1,600 ft.

Danciger O. & R. Co.'s No. 1 Catlin et al, 175 ft. S, 300 ft. E of N 71 ac. of E 231 ac., Sec. 57, Blk. 3, I.&G.N. Sur. ..... Location.

Danciger O. & R. Co.'s No. 5 Morse, 330 ft. N and E, SW SW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... S.D. 2,505 ft.

Danciger O. & R. Co.'s No. 1 Shaw, 330 ft. S, 286 ft. E of E 39½ ac., NW, Sec. 5, Blk. 1, A.C.H.&B. Sur. .... T.D. 2,588 ft.

Empire G. & F. Co.'s No. 1-B Archer, 330 ft. each way of SW cor. SW, Sec. 139, Blk. 3, I.&G.N. Sur. ..... S.D. 2,599 ft.

Empire G. & F. Co.'s No. 2 Hexter, C SE, Sec. 235, Blk. B0Z, H.&G.N. Sur. ..... Drlg. 1,430 ft.

Empire G. & F. Co.'s No. 1 Shields, 330 ft. each way out of SE cor. NE, Sec. 151, Blk. 3, I.&G.N.R.R. Sur. ..... Drlg. 2,610 ft.

Empire G. & F. Co.'s No. 1 Whittemore, 2,310 ft. N and W, Sec. 14, Blk. 4, I.&G.N. Sur. ..... Location.

Follett Pet. Corp.'s No. 1 Hood, 330 ft. S and W of W 80 ac., SW, Sec. 32, Blk. 3, H.&G.N.R.R. Sur. ..... T.D. 3,143 ft.; C.O. after shot.

Gardner Bros. and Collins' No. 2 Saunders, 955 ft. S, 330 ft. E of W 68 ac., E½, J. G. Eustice Sur. ..... Location.

Gulf Prod. Co.'s No. 2 Combs et al, 990 ft. N, 330 ft. W, SE cor., Sec. 38, Blk. 3, I.&G.N.R.R. Sur. ..... S.G. 2,600-05 ft; S.D. 2,845 ft; swbd. 660 bbls. in 22 hrs.

Humble O. & R. Co.'s No. 2 Combs-Worley, 240 ft. W line, 330 ft. N line, N½ SE, Sec. 36, Blk. 3, I.&G.N.R.R. Sur. ..... S.D. 2,754 ft; S.G. 2,395 ft. and 2,586 ft.

Humble O. & R. Co.'s No. 1 Young, C SW, Sec. 110, Blk. 3, I.&G.N. Sur. ..... Rig.

LeFlore Pet. Corp.'s No. 1 Wilson, 330 ft. N and E, Sec. 1, B.S.&F. Sur. ..... Drlg. 220 ft.

Lenix et al's No. 1 Bradford, 330 ft. N and E, W½ SE, Sec. 118, Blk. B-2, H.&G.N.R.R. Sur. ..... S.D. 2,230 ft.

Lyon et al's No. 1-A Morse, 330 ft. S and W, NW NW, Sec. 1, Blk. 26, H.&G.N.R.R. Sur. ..... S.D. 390 ft. to set 10-in. csg.

Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W cor. SE, Sec. 200, Blk. B-2, H.&T.N. Sur. ..... S.D. 1,350 ft.

Magnolia Pet. Co.'s No. 1 Cubine, 330 ft. N and W. NE, Sec. 36, Blk. 25, H.&G.N.R.R. Sur. ..... 9,000,000 ft. gas 2,325-35 ft.; T.D. 2,775 ft.; to shoot.

Magnolia Pet. Co.'s No. 5 Magnolia, 990 ft. N, 330 ft. E, SW cor., Sec. 14, Blk. 3, I.&G.N.R.R. Sur. ..... S.D. 2,480 ft.

McAuley et al's No. 4 Morse, 330 ft. N and W, SE cor. NE, Sec. 2, Blk. 26, H.&G.N.R.R. Sur. ..... Rig.

McIlroy Oil Co.'s No. 1 Vallmert, 330 ft. each way out of SE cor., NW, Sec. 140, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,440 ft.

Oil Operators' No. 1 Bowers, 330 ft. N, 330 ft. E, Sec. 93, Blk. B-2, H.&G.N. Sur. ..... Show oil and gas 2,400-17 ft.; S.O. 3,036-55 ft.; first gas 2,483 ft., increase at 2,500 ft., 2,544 ft. and 2,950 ft.; S.D. 3,090 ft.

Prairie O. & G. Co.'s No. 2 Laugham, 330 ft. S and E, NW cor., W 230.3 ac. of S 310.5 ac., Sec. 1, Blk. B-2, H.&G.N. Sur. ..... S.D. 2,896 ft; swbng. 90 bbls. oil daily; T.P. 2,742 ft.

Prairie O. & G. Co.'s No. 1 Worley, 330 ft. each way out of NW cor. NW, Sec. 36, Blk. 3, I.&G.N.R.R. Sur. .... S.D. 2,823 ft; T.P. 2,783 ft; swbng. 800 bbls. oil daily.

Prairie O. & G. Co.'s No. 2 Worley, 330 ft. each way out of NE cor. NW, Sec. 36, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,850 ft; S.O. 2,847 ft.

Prairie O. & G. Co.'s No. 3 Worley, 330 ft. each way out of SE cor. NW, Sec. 36, Blk. 3, I.&G.N.R.R. Sur. .... S.G. 2,284 ft. and 2,312 ft; S.D. 2,751 ft.

Saulsbury et al's No. 1 Sheridan, 330 ft. S and E, W½ NE, Sec. 184, Blk. B-2, H.&G.N. Sur. ..... Rigging up.

W. A. Scott's No. 1 Cobb, 330 ft. S, 425 ft. W, N½ SE, Sec. 184, Blk. 3, I.&G.N. Sur. ..... Drlg. 475 ft.

So. Pet. Explin. Co.'s No. 1 Vaughn, 330 ft. N and W, SW, Sec. 138, Blk. 3, I.&G.N. Sur. ..... S.D. 830 ft.

Reynolds et al's No. 1 Webb, 330 ft. N, 380 ft. E, NW, Sec. 60, Blk. 25, H.&G.N.R.R. Sur. ..... Fishing 2,370 ft.

Rieger & Steckoll's No. 1 Bohr, 330 ft. S and E, Sec. 37, Blk. B-3, H.&G.N. Sur. ..... S.D. 3,509 ft.

Stover and Shell's No. 1 Saunders, 990 ft. N, 330 ft. E, N 100 ac. of W 149 ac., Sec. 3, B.&B. Sur. ..... 2,000,000 ft. gas 2,670-75 ft.; T.D. 2,956 ft.; shot 60 qts.; no results; C.O.

Sun Oil Co.'s No. 1 Combs-Worley, 330 ft. each way, SW cor. SE, Sec. 35, Blk. 3, I.&G.N. Sur. ..... S.G. 2,175 ft; 15,000,000 ft. gas 2,807-40 ft; S.D. 2,840 ft.

Vulcan O. & G. Co.'s No. 1 Carpenter, 330 ft. N and W, W 80 ac., NW, Sec. 25, Blk. 25, H.&G.N.R.R. Sur. ..... Drlg. 2,330 ft.

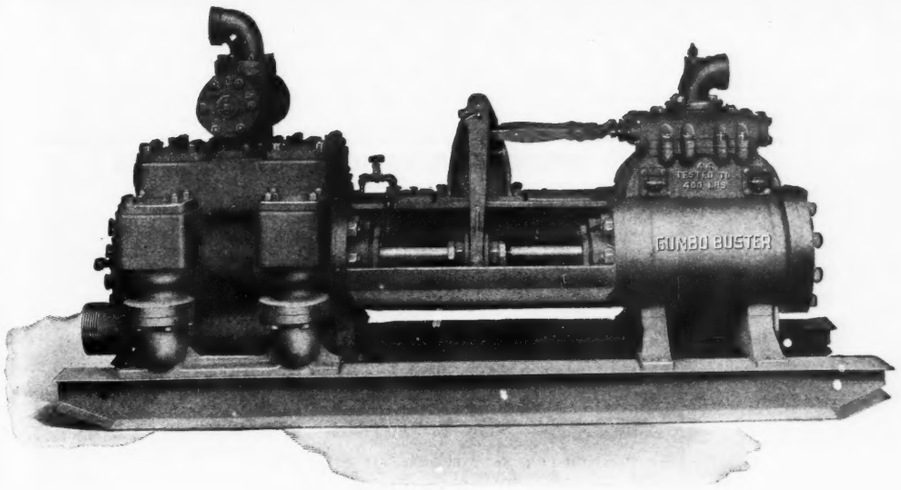
Wilson et al's No. 1 Heaston, 330 ft. S and W, Sec. 160, Blk. B-2, H.&G.N.R.R. Sur. ..... S.D. 1,025 ft.

Wright Wilson, trustee's No. 1 Chapman, 175 ft. S and E lines, N½ NW, Sec. 69, Blk. 25, H.&G.N. Sur. .. S.O. 2,685 ft.; S.D. 2,800 ft.

HARTLEY COUNTY

Dana O. & G. Co.'s No. 1 Fritz, C NE, Sec. 81, Blk. 44, H.&T.C.R.R. Sur. ..... Top gas 3,515 ft; 12,000,000 ft. gas 3,565 ft; S.D. 3,770 ft.

The Epitome of 40 Years Oil Field Experience



Gumbo Buster

Type "G"

Designed for high steam pressure and high working pressure. Equipped with a steel *four piece water end;* piston type steam valves; cushion valves.

Size: 14½" x 7¼" x 18". Diameter of steam end 14½". Diameter of fluid end liner 7¼". Length of stroke 18".

Weight: 11,000 pounds. By comparison the "G" Pump will be found to be considerable lighter and stronger than any other pump of similar size and use. This is due to the light steel water end.

Fluid End: Made in four pieces of cast electric chrome nickel steel. Four piece steel fluid end has following advantages over cast iron fluid end: (1) Much stronger and lighter; (2) Can be readily welded in the field should any unavoidable accident occur; (3) Any one piece of the four can be replaced.

Steam Piston Valves: Balanced Piston Valve.

Lubrication: All external moving parts oiled by the Alemite system.

Gumbo Buster

Type "J"

Designed for use on wells of any depth, when the steam pressure used does not exceed 250 pounds. Has steel skids; *four-piece fluid end;* balanced steam piston valve.

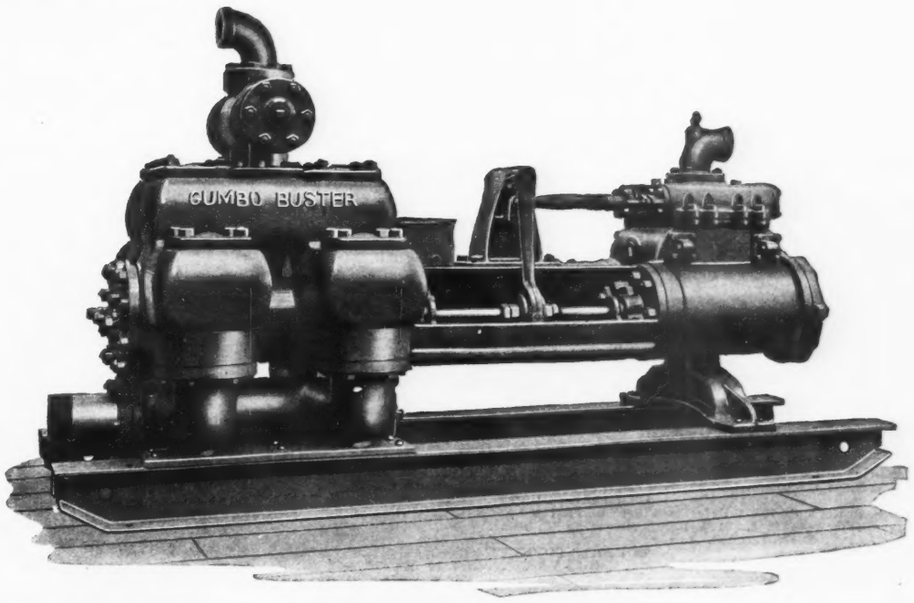
Size: 12" x 6¼" x 16". Diameter of steam cylinder 12". Diameter of fluid end liner 6¼". Length of stroke 16".

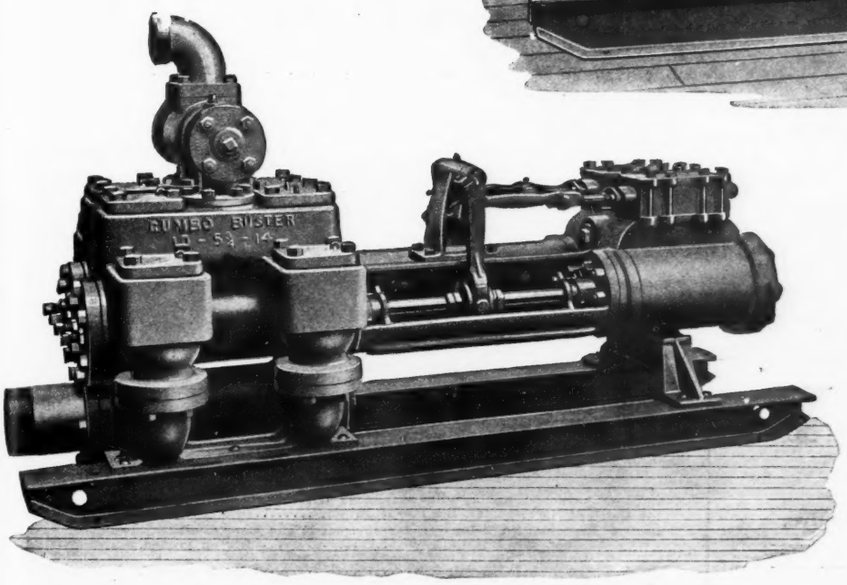
Weight: 10,850 pounds.

Fluid End: Made in four pieces. The suction manifold and two cylinders are made of semi-steel. The discharge manifold is an electric steel casting. Any one of the four pieces can be easily replaced.

Steam End: Made of semi-steel. The piston, valve cage, steam end and steam end leg are cast separately and any one piece can be replaced.

Lubrication: All external moving parts oiled by the Alemite system.





Gumbo Buster

Type "H"

Designed for use in four inch or smaller drill pipe and where the steam pressure does not exceed two hundred and fifty pounds.

Size: 10" x 5¾" 14". Diameter of steam end 10". Diameter of fluid end cylinder 5¾". Length of stroke 14".

Weight: 6,800 pounds.

Fluid End: Made in four pieces of cast semi-steel. Four piece fluid end has following advantages over the one piece fluid end: (1) Much stronger and lighter; (2) Any one piece of the four can be replaced.

Steam End: Made of semi-steel. Steam end legs, valve chest and housing are separate castings, and any one piece can be replaced.

Skids: Heavy "H" beams, 6 inches high by 9 feet long.

Lubrication: All external moving parts oiled by the Alemite system. It is recommended that a force feed lubricator be used on the steam end.

Republic Supply Company

OIL AND GAS WELL SUPPLIES

Cable and Rotary Tools

GENERAL OFFICES: HOUSTON, TEXAS

HUTCHINSON COUNTY

Alamosa Oil Co.'s No. 4 Sanford, 310 ft. S, 320 ft. W, NE cor. N 160 ac., S 240 ac., Sec. 85, Blk. 46, H. &T.C. Sur. ..... S.O. and wtr. 3,010-11 ft.; S.D. 3,095 ft.

Alexander et al's No. 1 Johnson, 1,709 ft. E, 330 ft. N, N 80 ac., E½, E. T. Tomlinson Sur. ..... Set 6-in. csg; T.D. 2,908 ft.

Continental Oil Co.'s No. 1 Johnson-E, 330 ft. N and E, SW cor. SE, Sec. 5, Blk. I, B.&B. Sur. ..... S.D. 3,220 ft.

Danciger O. & R. Co.'s No. 1 Cheatham, 330 ft. N and E, SW SE, Sec. 38, Blk. Y, A.&B. Sur. ..... S.D. 2,450 ft.

Danciger O. & R. Co.'s No. 3 Moore, 330 ft. S and E, NW W½ SE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. ..... 1,000 ft. oil in hole 3,003-20 ft.; S.D. 3,030 ft.

Danciger O. & R. Co.'s No. 4 Moore, 330 ft. N and E, SW cor. W½ SE, Sec. 125, Blk. 4, I.&G.N.R.R. Sur. .. Rigging up standard tools; T.D. 2,825 ft.

Dixon Creek Oil Co.'s No. 2 Cheatham, 330 ft. N, 1,650 ft. W, SE cor. N½ SE, Sec. 38, Blk. Y ..... S.D. 2,900 ft.

Dixon Creek Oil Co.'s No. 1 Johnson Bros., 50 ft. S, 330 ft. W, NE cor. E 80 ac., J. Gammon Sur. ..... S.D. 3,171 ft; 800 ft. oil in hole; T.P. 3,118 ft.

Huey et al's No. 3 Smith et al, 330 ft. N, 660 ft. W, S 40 ac., E 100 ac., SE, Sec. 12, Blk. Y ..... S.D. 2,702 ft.

Midwest Explin. Co.'s No. 1-B Garner et al, 330 ft. N, 990 ft. W, Sec. 124, Blk. 4, I.&G.N.R.R. Sur. ..... Drlg. 2,535 ft.

Phillips Pet. Co.'s No. 1 Johnson-Burl, 330 ft. S and W, NE cor. W 240 ac., N 320 ac., Sec. 4, Blk. 1, B.&B. Sur. ..... Drlg. 2,990 ft.

Phillips Pet. Co.'s No. 1 Johnson-Trammel, 930 ft. N, 330 ft. W, SE cor. W½ NW, Sec. 38, Blk. Y ..... S.O. 3,060 ft; C.O. 3,250 ft.

Phillips Pet. Co.'s No. 1 Johnson-Mayer, 990 ft. N and 990 ft. W line, NE, Sec. 37, Blk. Y, A.&B. Sur. ..... C.O. 2,955 ft.

Phillips Pet. Co.'s No. 1 Johnson-Rudy, 330 ft. W, 330 ft. S, SW SW, Sec. 30, Blk. Y, A.&B. Sur. ..... Drlg. 2,790 ft.

Phillips Pet. Co.'s No. 1 Vake (Hazel), 330 ft. N and W, Sec. 4, Blk. X02, H.O.&B. Sur. ..... Drlg. 350 ft.

Spurlock et al's No. 1-A Christian, 440 ft. S, 330 ft. W, NE cor. SE SE, Sec. 33, Blk. Y ..... Fishing 2,225 ft.

Texarado Oil Co.'s No. 2 Stanford, 330 ft. S, 990 ft. W, NE cor., N 80 ac., S 160 ac., Sec. 83, Blk. 46, H.& T.C.R.R. Sur. ..... S.D. 3,023 ft; 150 ft. oil in hole; T.P. 3,017 ft.

Texas State Oil Co.'s No. 1 Dunaway, 330 ft. S and W, NE, Sec. 5, Blk. 2-Y, T.T.&R.R. Sur. ..... Rig.

LAMB COUNTY

Graham O. & G. Co. et al's No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... S.D. 4,408 ft.

LIPSCOMB COUNTY

Brown et al's No. 1 Box T Ranch, SW NE, Sec. 612, H.&T.C. Sur. ..... S.G. 3,760 ft; S.D. 3,890 ft.

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... S.D. 4,954 ft.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles Ranch ..... Small S.O. 1,133-40 ft.; S.D. 4,167 ft.

MOORE COUNTY

Delmar Oil Co.'s No. 1 Jones, 990 ft. E, 330 ft. N, NW, Sec. 171, Blk. 3-T, T.&N.O. Sur. ..... Location.

Fritch O. & G. Co.'s No. 1 Lee Bivins, C N 40 ac., N 160 ac., Sec. 4, George Mahan Sur. ..... 2,000,000 ft. gas 1,550-65 ft.; T.D. 3,212 ft.; S.O. 3,188 ft.; shot 40 qts. from 3,182-3,202 ft.; no results; S.D.

Gulf Prod. Co.'s No. 1 Kilgore, C SW, Sec. 22, Blk. P.Mc., E.L.R.R. Sur. ..... Gas, estimated 15,000,000 ft. 3,050-60 ft; drlg. 3,485 ft.

Red River Gas Co.'s No. 1 J. M. Shelton, 330 ft. each way from SE cor., Sec. 52, Blk. 3, G.&M. Sur. ..... S.D. 3,080 ft.

Shamrock O. & G. Co.s No. 1 Shory, 330 ft. N and W, NE, Sec. 187, Blk. 3-T, T.&N.O. Sur. ..... Rigging up.

MOTLEY COUNTY

Explin. Co.'s No. 6 Matador, 330 ft. N line, 330 ft. E line, Sec. 132, Blk. M ..... S.D. 4,011 ft.

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 580 ft.

POTTER COUNTY

Canadian River Gas Co.'s No. 1-N Masterson, 330 ft. E, 1,320 ft. S, Sec. 17, Blk. 3, G.&M.R.R. Sur. ..... Drlg. 2,325 ft.

RANDALL COUNTY

W. A. Patterson's No. 1 Palo Duro, Sec. 60, Blk. K-14 ... S.D. 1,250 ft.

Texas Interstate P. L. Co.'s No. 1 Masterson, C, Sec. 37, Blk. B-10, E.L.R.R. Sur. ..... Location.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Ledrick, Sec. 7, Blk. A-5 ..... Shot 10 qts. 5,270-93 ft.; S.O. 5,288 ft.; S.D. 5,992 ft.

WHEELER COUNTY

Anderson's No. 1 Reneau, C SW NE, Sec. 98, Blk. 23, H.&G.N. Sur. ..... Location.

Dunaway Bros.' No. 1 Worley, 330 ft. S and W, NE cor. NW, Sec. 39, Blk. 24, H.&G.N.R.R. Sur. ..... T.D. 2,120 ft.; 5,000,000 ft. gas 2,025-35 ft.

Four Leaf Drlg. Co.'s No. 1 Jackson, 330 ft. S and W, NE, Sec. 11, Blk. 27, H.&G.N. Sur. ..... S.D. 2,175 ft; S.G. 2,170 ft.

Johnson et al's No. 2 Hicks, 890 ft. W, 990 ft. S, Sec. 49, Blk. 17, H.&G.N. Sur. ..... Drlg. 450 ft.

Lone Star Gas Co.'s No. 1 Brown, C NW NE, Sec. 53, Blk. 23, H.&G.N.R.R. Sur. ..... Location.

Lone Star Gas Co.'s No. 1 Finley, C SW NW, Sec. 66, Blk. 17, H.&G.N. Sur. ..... Location.

Lone Star Gas Co.'s No. 2 Hicks (Martin), C NW NE, Sec. 52, Blk. 17, H.&G.N.R.R. Sur. ..... Location.

Lone Star Gas Co.'s No. 1 Nickell, C NW NW, Sec. 64, Blk. 17, H.&G.N.R.R. Sur. ..... Drlg. 300 ft.

Lone Star Gas Co.'s No. 1 Ridinger, C NW NW, Sec. 65, Blk. 17, H.&G.N. Sur. ..... Rig on ground.

McGee et al's No. 1 Jolly, C NE, Sec. 15, Blk. A-8, H.&G.N. Sur. ..... Location.

Murchison & Fain's No. 1 Parsons, 1,980 ft. W, 1,195 ft. N, Sec. 53, Blk. 23, H.&G.N. Sur. ..... Drlg. 1,740 ft.

Upham Gas Co.'s No. 1 Fee, 660 ft. S, 330 ft. W, W½ SW SE, Sec. 74, Blk. 17, H.&G.N. Sur. ..... Drlg. 1,500 ft.

Upham Gas Co.'s No. 1 Hoshor, C SE SW, Sec. 69, Blk. 17, H.&G.N. Sur. ..... Drlg. 1,110 ft.

Wischkamper et al's No. 2 Brown, C SE NE, Sec. 53, Blk. 23, H.&G.N.R.R. Sur. ..... Drlg. 1,275 ft.

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WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 65)

CRANE COUNTY

Cranfill et al's No. 1 Tubb, 2,310 ft. from N and 330 ft. from E of Sec. 8, Blk. B-27, Public School Land .... Top salt 505 ft.; fishing 2,420 ft.

C. C. Duffey's No. 1 Cowden Bros., 1,280 ft. from W and 660 ft. from S of Sec. 31, Blk. 2, H.&T.C. Sur. ..... Rigging up.

Duffey et al's No. 3 Cowden Bros. et al, 2,232 ft. from W line and 200 ft. from S line, Sec. 18, Blk. X ..... Drlg. 1,335 ft.

CROCKETT COUNTY

California Co.'s No. 2 Shannon, Lease No. 3, 258 ft. N and 2,997 ft. E of Sec. 42, T.C.R.R. Sur. ..... Shut down 2,450 ft.

Doleman & Moore's No. 1 Perner, 3,135 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur. ..... Machine.

Lewis & Daniels' No. 1 Pecos River bed, 19 yds. S and 37° E of NW cor., Sec. 33, Blk. 1, I.&G.N. Sur. ..... Shut down 1,407 ft.

Magnolia Pet. Co.'s No. 1 Hoover, 2,310 ft. from N and 330 ft. from E of Sec. 12, Blk. 1, G.C.&S.F.R.R. Sur... Top salt 660 ft.; show gas 1,858-1,950 ft.; 1 gal. oil per hr. from 2,205-10 ft.; drlg. 3,200 ft.

Trans-Texas Oil Co.'s No. 2 Shannon, 983 ft. from S and 1,873 ft. from E line of Sec. 42, T.C.R.R. Sur. .... Top salt 1,235 ft.; drlg. 2,345 ft.

CULBERSON COUNTY

Grisham & Hunter Corp.'s No. 1 Garren, 2,310 ft. from S and 330 ft. from E of Sec. 18, Blk. 89, P.S.L. Sur. ... Drlg. 2,395 ft.

Hickey & Stiver's No. 1 C. O. Finley, 600 ft. N and 1,980 ft. W, Sec. 20, Blk. 82 ..... Small show oil 1,331 ft.; shut down 2,895 ft.

Kornrumpf et al's No. 1 Garren, 330 ft. S and W, Sec. 15, Blk. 79, Public School Land ..... Drlg. 130 ft.

West Coast Oil & Exploration Co.'s No. 1 McGregor, C NW, Sec. 14, Blk. 81 ..... Slight show oil 740 ft.; shut down 875 ft.; may abandon.

Scott & Dittman's No. 1 Miller, 1,160 ft. N and 2,480 ft. E, Sec. 1, Blk. 97, Public School Land ..... Oil show 2,528 ft.; shut down 3,508 ft.

ECTOR COUNTY

Amerada and Skelly's No. 1-B University, 990 ft. from S and 440 ft. from E line, Sec. 2, Blk. 35, University Land ..... Underreaming casing; total depth 800 ft.

Cosden Oil Co.'s No. 2 University-B, 2,310 ft. S and 440 ft. W of NE cor. of Sec. 2, Blk. 35, University Land ..... Drlg. 2,850 ft.

C. P. Davis et al's No. 1 Hendricks, C SW, Sec. 46, Blk. 42, Twp. 2s, T.&P.R.R. Sur. ..... Drlg. 2,535 ft.

Gibson & Johnson's No. 1 Scharbauer, 990 ft. from N and E of Sec. 4, Blk. B-15, Public School Land ..... Drlg. 3,950 ft.

Gulf Prod. Co.'s No. 1 Kloh-G, 330 ft. N and 440 ft. E of SW cor., Sec. 5, Blk. 44, Twp. 3s, T.&P. Sur. ..... Drlg. 3,740 ft.; top pay 3,715 ft.; swabbed 62½ bbls. in 24 hrs.

Gulf Prod. Co.'s No. 2 State, 330 ft. S and 440 ft. W of NE cor. S 160 acres, Sec. 1, Blk. 35, University Land.. 6-in. 3,335 ft.; top brown lime 3,120 ft.

Gulf Prod. Co.'s No. 2 State-A, 330 ft. N and 440 ft. W of SE cor. N half S half, Sec. 2, Blk. 35, University.. Drlg. 2,700 ft.

Humble Oil & Ref. Co.'s No. 7-D Kloh et al, 330 ft. from N and 440 ft. from W of Sec. 7, Twp. 3s, Blk. 44, T.&P. Sur. ..... Drlg. 3,780 ft.; top pay 3,709 ft.

Humble Oil & Ref. Co.'s No. 8 Kloh-D, 986 ft. N and 440 ft. E of SW cor., Sec. 7, Twp. 3s, Blk. 44, T.&P. Sur. ..... Shut down 2,339 ft. to run casing.

Humble Oil & Ref. Co.'s No. 7 York, 1,650 ft. N and 440 ft. E of SW cor., Sec. 16, Blk. 44, Twp. 3s ..... Drlg. 2,080 ft.

Independent Oil & Gas Co.'s No. 1 Eldson, 1,250 ft. S and 2,144 ft. E of NW cor., Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur. ..... Drlg. 3,703 ft.

H. F. Wurtz' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW, Sec. 16, Blk. 46, Twp. 3s, G.M.M.Br.&A. Sur. ..... Spudded and shut down 30 ft.

T. P. Coal & Oil Co.'s No. 1 McKenzie, 1,650 ft. from S and 330 ft. from E of Sec. 282, Blk. 45, Twp. 2s, T.&P. Sur. ..... Drlg. 3,625 ft.

Transcontinental Oil Co.'s No. 1 University, 1,650 ft. from N and 440 ft. from E line of Sec. 3, Blk. 35, University Land ..... Drlg. 1,400 ft.; top salt 1,140 ft.

R. R. Penn et al's No. 1 Goodman et al, 2,640 ft. N and 330 ft. W of SE cor., Sec. 27, Blk. 44, T.&P.R.R. Sur... Building derrick.

Skelly Oil Co.'s No. 2-A University, 330 ft. S and 440 ft. W of NE cor., Sec. 1, Blk. 35, University Land ... Drlg. 3,500 ft.

Skelly Oil Co. and Republic Prod. Co.'s No. 1 McKenzie, 990 ft. from S line and 330 ft. from E line of Sec. 28, Blk. 45, Twp. 2s, T.&P. Sur. ..... Shut down 770 ft.

Sunray Oil Co. et al's No. 1 Jones, 2,330 ft. from N and 440 ft. from E of Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur... Rigging up.

The Texas Company's No. 7 Connell, 2,310 ft. from S and 440 ft. from W, Sec. 1, Blk. B-16, Public School Land ..... Drlg. 2,670 ft.

EL PASO COUNTY

Lane-The Texas Company's No. 1 Malone, 2,110 ft. from SW and NW of Sec. 46, J. M. Day Sur. ..... Shut down 1,722 ft.

FISHER COUNTY

Cranfill & Reynolds' No. 1 Johnson, 440 ft. from N and 1,540 ft. from W of Sec. 3, Blk. R, Richardson Sur... Shut down 3,198 ft.; plugged back to 3,187 ft.

Cranfill & Reynolds' No. 2 Willingham, 330 ft. from N and E of NW, Sec. 199, B.B.B.&C.R.R. Sur. ..... Drlg. 2,555 ft.

Cranfill & Reynolds' No. 2 Barrett, 330 ft. from N and W of NE, Sec. 199, B.B.B.&C. Sur. ..... Rig on ground.

Cranfill & Reynolds' No. 1 Flannigan, 330 ft. from S and E, Sec. 200, B.B.B.&C. Sur. ..... Rig on ground.

Mid-West's No. 1 Decker, 330 ft. from S and W of W 80 ac. of N 160, Sec. 8, Richardson Sur. ..... Location.

Roeser & Pendleton's No. 1 Steele, 660 ft. from N and 440 ft. from W of N half of SW, Sec. 210, B.B.B.&C. Sur. ..... Rigging up.

GAINES COUNTY

Humble Oil & Ref. Co.'s No. 1 Carswell, 660 ft. S and E of NW cor. of Sec. 23, Blk. A-27, Public School Land. Underreaming casing; total depth 1,010 ft.

GARZA COUNTY

Pandem Oil Corp.'s No. 1 Justice, 330 ft. from S and W of Sec. 12, Blk. 6, H.&G.N. Sur. ..... Location.

GLASSCOCK COUNTY

California Co.'s No. 1 Jones, 330 ft. S from N and E lines, Sec. 25, Blk. 33, Twp. 2s, T.&P. Sur. ..... Drlg. 2,055 ft.

Kirby Pet. Co. et al's No. 2 Phillips, 990 ft. S and 2,310 ft. E of NW cor., Sec. 23, Blk. 33, Twp. 2s, T.&P. R.R. Sur. ..... Drlg. 1,345 ft.; show oil 1,325 ft.

Kirby Pet. Co. et al's No. 3 Phillips, 1,650 ft. S and 2,310 ft. E of NW cor., Sec. 23, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ..... Shut down 2,125 ft.

Shell Pet. Corp.'s No. 1 Phillips, 1,650 ft. S and 2,310 ft. W of NE cor., Sec. 23, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ..... Show oil 1,374-1,414 ft.; drlg. 2,187 ft.

Timberlake & Snyder's No. 1 Meek, 2,310 ft. W and 1,600 ft. N of SE cor., Sec. 7, Blk. 34, Twp. 3s, T.P. Sur. ... Show oil 970 ft.; drlg. 2,915 ft.

World Oil Co.'s No. 3-C McDowell, 2,310 ft. from S and W of NE cor., Sec. 21, Blk. 34, Twp. 2s, T.&P. Sur. ... Location.

World Oil Co.'s No. 1 Edwards, 330 ft. from S line and 2,310 ft. from W line of Sec. 13, Blk. 84, Twp. 2s, T.&P. Sur. ..... Drlg. 620 ft.

HOWARD COUNTY

Cosden Oil Co.'s No. 6 Roberts-A, 200 ft. N and E of SW cor., Sec. 129, Blk. 29, W.&N.W.R.R. Sur. ..... Sulphur water 1,433-46 ft.; shut down 1,456 ft.

McGinley-Sigler's No. 1 Hyman-C, 330 ft. N and 990 ft. W SE cor., Sec. 93, Blk. 29, W.&N.W.R.R. Sur. ..... Location.

Merriwether's No. 1 Smith, 150 ft. from S, 2,490 ft. from W, Sec. 45, Blk. 33 ..... Drlg. 2,530 ft.

Moody Oil Corp.'s No. 23-B Roberts, 990 ft. from N and W of Sec. 137, Blk. 29 ..... Shut down 261 ft.

Sinclair O. & G. Co.'s No. 1 Montgomery et al, 2,310 ft. from N and W of Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. ..... Drlg. 1,173 ft.

HUDSPETH COUNTY

California Co.'s No. 1 University, 3,821 ft. N and 2,554 ft. E of SW cor., Sec. 19, Blk. E ..... Slight oil show 4,021-23 ft.; shut down 4,487 ft.

Western States Oil Co.'s No. 1 Moore, C SE, Sec. 16, Blk. 71, Twp. 6, T.&P. Sur. ..... Shut down 2,760 ft.

Western States Oil Co.'s No. 1 Gardner & Moseley, NE NW, Sec. 12, Blk. 18 ..... Fishing 3,155 ft.

IRION COUNTY

Crawford Oil Co.'s No. 1 Williams, 450 ft. from N, 150 ft. from W, Subd. 8 ..... Shut down 1,105 ft.

Cromwells' No. 2 Nutt, 504 ft. from N and 1,162 ft. from W of Subd. 6, Gonzales County School Land .... Top pay 1,451 ft.; total depth 1,461 ft.; swabbed and flowed 85 bbls. in 3 hrs.

Fox et al's No. 3 Tankersley, 1,520 ft. from S and 450 ft. from E of Sec. 712, F. Willig Sur. ..... Location.

Glenn et al's No. 1 Tankersley, NW cor. SW, Sec. 4, G.C.&S.F.R.R. Sur. ..... Location.

Kingwood Oil Co. et al's No. 1 J. D. Suggs, SE NW SE, Sec. 19, Blk. 7, H.&T.C. Sur. ..... Show gas 7,656 ft.; encountered 2,-400 ft. sulphur water 7,818 ft.; plugged back to 6,700 ft.; cleaning out; swabs 3 bbls. oil daily.

P. H. Williams' No. 1 Ash, C of Sec. 20, Washington County ..... Show oil 7,931 ft.; shut down 8,-890 ft.; may drill deeper.

Straughan and Texannati Oil Co.'s No. 1 Nutt, 150 ft. N and E of NW NW, Blk. 6, Gonzales County School Land ..... Shut down 640 ft.

JONES COUNTY

Mid-Tex Oil Co.'s No. 1 King, 330 ft. E of river and 800 ft. S of N line, Subd. 1, Sec. 197, M. Bueno Sur... Topped sand 1,980 ft.; putting on pump.

Shabeen et al's No. 1 King ..... 800 ft. fluid in hole; shut down 2,204 ft.; top pay 2,061 ft.; cleaning out after shot.

KENT COUNTY

White & Smith's No. 1 Pursley estate, 1,320 ft. from E and 2,640 ft. from S of Sec. 8, Blk. H, H.&T.B. Sur... Shut down 273 ft.

LAMB COUNTY

Graham Oil & Gas Co.'s No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... Shut down 4,428 ft.

LOVING COUNTY

California Co.'s No. 1 Allen, 330 ft. from SE and SW of Sec. 90, Blk. 1, W.&N.W. Sur. ..... Drlg. 4,165 ft.

California Co.'s No. 1 Reagan & McElvain, 330 ft. SW of NE line and 330 ft. SE of NW line, Sec. 84, Blk. 1, W.&N.W.R.R. Sur. ..... Drlg. 3,895 ft.

Dixie and Phillips Pet.'s No. 1 Johnson, 1,320 ft. from N and E of Sec. 38, Blk. 54, Twp. 2s, T.&P. Sur. .... Drlg. 275 ft.

Lockhart & Co.'s No. 3 Bowen & Wells, 330 ft. from NE and SE of Sec. 92, Blk. 1, W.&N.W. Sur. ..... Shut down 3,383 ft.

Hadlock et al's No. 2 Russell, 1,650 ft. SW of NE line, 2,310 ft. NW of SE line, Sec. 80, Blk. 1, W.&N.W. R.R. Sur. ..... Rigging up and shut down.

Lockhart & Co.'s No. 2 fee, 676 ft. S, 330 ft. W, Sec. 91, Blk. 1, W.&N.W. Sur. ..... Spudded 140 ft.; shut down.

Lockhart & Co.'s No. 3 Hubbard, 1,650 ft. from NE line, 330 ft. NW line of Sec. 83, Blk. 33, H.&T.C.R.R. Sur... Location.

Lockhart's No. 1 Wheat & Ramsey, 440 ft. from NE and NW of Sec. 83, Blk. 1, W.&N.W. Sur. ..... Drlg. 3,630 ft.

Miller et al's No. 1 Chapman, 225 ft. from NW and 285 ft. from SW line, Sec. 71, Blk. 1, W.&N.W. Sur. ..... Rigging up.

Rush et al's No. 1 Wheat, 1,650 ft. from NW and 330 ft. from SW of Sec. 85, Blk. 1, W.&N.W. Sur. ..... Location.

LYNN COUNTY

Lubewell Oil Co.'s No. 1 May, 2,310 ft. S, 2,310 ft. W, Sec. 10, Blk. 7, E.L.R.R. Sur. ..... Shut down 190 ft. for casing.

George McCamey's No. 1 Edwards, 165 ft. N and E, Sec. 5, Blk. 2, L.S.&W. Sur. ..... Top salt 2,140 ft.; oil show 1,580-90-ft.; hole full sulphur water 4,730 ft.; shut down 5,040 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... Shut down 1,585 ft.

MIDLAND COUNTY

Pure Oil Co.'s No. 1 Hutt, 2,310 ft. from N and 330 ft. from E of Sec. 14, Blk. 38, Twp. 4s, T.&P. Sur. ..... Drlg. 1,000 ft.

MITCHELL COUNTY

Gant & Teas' No. 1 Handley, 330 ft. S and W parallel to section lines of NE cor. of SE, Sec. 12, Blk. 28, Twp. 1n, T.&P. Sur. ..... Location.

Morrison et al's No. 2 Morrison, 2,390 ft. from N and 660 ft. from E of Sec. 31, Blk. 28, Twp. 1n, T.&P. R.R. Sur. ..... Total depth 3,112 ft.; top pay 3,038 ft.; 1,000 ft. oil in hole.

PECOS COUNTY

Atlantic O. P. Co.'s No. 1 Shearer, 330 ft. from NW and SW, Sec. 107, Blk. 10, H.Y.N.R.R. Sur. ..... Show oil and gas 1,052 ft.; and 1,170 ft.; top pay 1,438 ft.; plugged back 1,450 ft.; putting on pump.

Black et al's No. 1 Pecos Valley Oil Co., 1,520 ft. from SE and 1,120 ft. from SW of Sec. 34, Blk. 3, H.&T.C. R.R. Sur. ..... Drlg. 1,565 ft.; show oil 1,547 ft.

California Co.'s No. 1 Jasper Co. Realty Co., 165 ft. from NE line and 159 ft. from SE line of California Co.'s 160 acres, Sec. 21, Blk. 10, B.&G.N.R.R. Sur. ..... Show oil 1,340 ft.; shut down 1,435 ft.

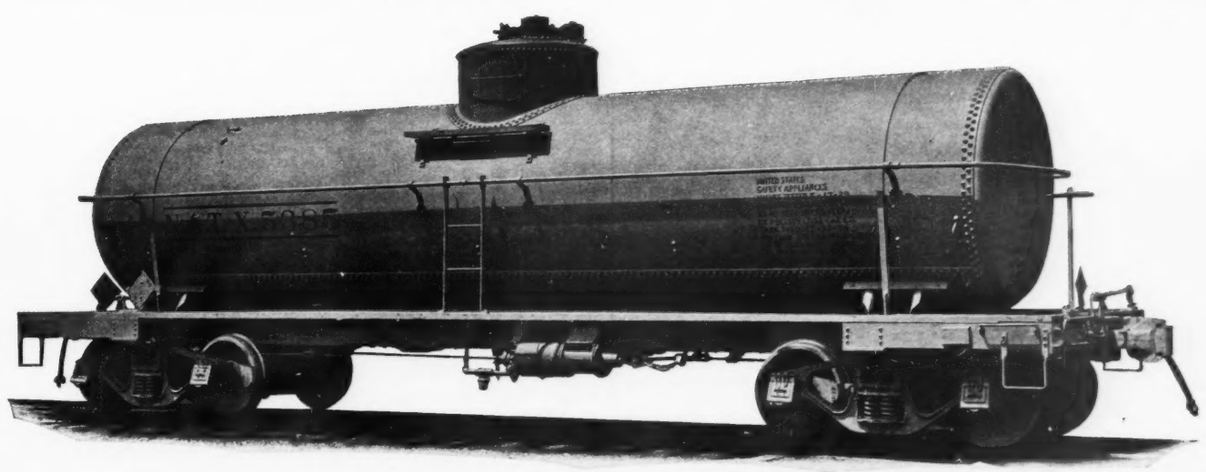
Crosby Prod. & Ref. Co.'s No. 1 Cordova, 330 ft. from N and E of S 320 ac., Sec. 11, H.&G.N. Sur. ..... Top salt 725 ft.; shut down 2,080 ft.

Cromwell et al's No. 1 University, 1,980 ft. from S and 2,310 ft. from E, Sec. 16, Blk. 16 ..... Drlg. 1,885 ft.

Fisher & Lowrie's No. 1 Webb, C, Sec. 3, Blk. 203, Tilman & Walters Sur. ..... Shut down 775 ft.

Hayes et al's No. 1 Lea, C NW of NE, Sec. 9, Blk. 106, T.&St.L. Sur. ..... Location.

TANK CARS OF ALL TYPES



COMPLETE FACILITIES FOR REPAIRING CARS

UNDERFRAMES - TRUCK FRAMES AND BOLSTERS - WHEELS

PRESSED STEEL CAR COMPANY

NEW YORK PITTSBURGH CHICAGO ST. LOUIS ST. PAUL

Humble Oil & Ref. Co.'s No. 1 Kokernot, 1,320 ft. from N line and 1,467 ft. from W line of Sec. 227, Blk. 10, G.H.&S.A. Sur. ..... Shut down 110 ft.
Hussman Oil Co.'s No. 1 Esters, 960 ft. from N and 300 ft. E, Sec. 83, Blk. OW, T.M.R.R. Sur. ..... Fishing 1,680 ft.
Independent Oil & Gas Co.'s No. 1 Jasper County School Land, 1,160 ft. from SE line, 160 ft. from NE line, Sec. 21, Blk. 10, H.&G.N.R.R. Sur. ..... Shut down 1,585 ft.; 25,000,000 ft. gas at 1,555 ft.

Martin A. Meyer et al's (formerly Mauch & Kroger) No. 1 Holmes, S half SW, Sec. 5, Blk. 178, T.C. Sur. .... Shut down 2,224 ft.
Messenger et al's No. 1 Byrne, 2,130 ft. from NW line, 1,830 ft. from SW line, Sec. 54, Blk. 10, H.&G.N.R.R. Sur. ..... Shut down 1,110 ft.
J. R. Miller et al's No. 1 Bennett, 359 ft. W from CWL, Sec. 1, Blk. 119, G.C.&S.F. Sur. ..... Spudded and shut down.
J. D. O'Mara's No. 1 Bennett, Sec. 592, 1,460 ft. from S, 150 ft. from E, G.&C.S.F. Sur. ..... Drlg. 1,138 ft.; top pay 1,089 ft.; 700 ft. fluid in hole.

J. D. O'Mara's No. 1 Streety, C of Sec. 1, W. P. Howard Sur. ..... Show oil 1,785 ft.; shut down 2,200 ft.

Peren Oil Co.'s No. 2 Eaton, C of E of W, Sec. 27, Blk. 3, H.&T.C. Sur. ..... Drlg. 750 ft.
R. W. Porpus et al's No. 1 State Land, 330 ft. S and W lines of NE, Sec. 28, Blk. OW, T.C.R.R. Sur. ..... Spudded and shut down.
Phillips Pet. Corp.'s No. 3 Monroe, 3,860 ft. from N and 660 ft. from E, Sec. 39, Blk. 194, G.C.&S.F. ..... Cellar.
Phillips Pet. Corp.'s No. 1 Shearer, 330 ft. from NE and SE lines of S, Sec. 99, Blk. 10, H.&G.N.R.R. Sur. .. Drlg. 1,566 ft.
Riser & White's No. 1 Riser, 2,297 ft. from S and 997 ft. from E of Sec. 24, Blk. 12, H.&G.N. Sur. ..... Location.
Rector Oil Co.'s No. 1 Young, 330 ft. S and 1,650 ft. E of SW cor., Sec. 26, Blk. 9, H.&G.N. Sur., but in Sec. 4, Blk. 3, H.&T.C. Sur. ..... Show oil 1,620 ft.; drlg. 2,350 ft.
Southern Crude Oil Pur. Co.'s No. 1 Eaton, 330 ft. from SE line, 1,650 ft. from SW line of Sec. 35, Blk. 3, H.T.C.R.R. Sur. ..... Shut down 1,737 ft.; top pay 1,580 ft.

Shell Pet. Corp.'s No. 5 Smith-D, 990 ft. N and W of SE cor. of Sec. 24, Blk. 194, G.C.&S.F.R.R. Sur. ..... Top pay 1,754 ft.; flowed 60 bbls. hr.; shut down 1,883 ft.

Sides & Cloyd's No. 2 Blackstone & Slaughter, C NW of Sec. 34, Blk. A-2, T.&C.R.R. Sur. ..... Shut down 1,340 ft.
The Texas Company's No. 1 Wright, 660 ft. S and E of NW cor., Sec. 9, Blk. 131, T.&S.T.L. Sur. ..... Drlg. 2,350 ft.
Transcontinental Oil Co.'s No. 1 University, 1,980 ft. N and E of SW cor., Sec. 18, Blk. 18, University Land .. Total depth 4,910 ft.
Transcontinental Oil Co. et al's No. 3 Sellman, 330 ft. from S and E, Sec. 7, Blk. Z, T.C.Ry. Sur. ..... Drlg. 1,670 ft.
Transcontinental Oil Co. et al's No. 1-A Sellman, 340 ft. from N and 330 ft. from E of SE. Sec. 12, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 1,540 ft.
Transcontinental Oil Co. et al's No. 1 Tippett, 380 ft. from S and 660 ft. from E, Sec. 8, Blk. 194, G.C. &S.F. Sur. ..... Drlg. 1,790 ft.
Trees Oil Co.'s No. 3 Trees, 330 ft. from S and W of Sec. 90, Blk. T, H.&G.N. Sur. ..... Show oil and gas 1,875-81 ft.; drlg. 2,265 ft.

W. F. Walsh et al's No. 1 Scharbaur Cattle Co., 330 ft. S and 990 ft. E from C, Sec. 16, Blk. 136, T.&St. R.R. Sur. ..... Fishing 1,640 ft.
Walsh et al's No. 1 Shearer, 330 ft. from NE and NW of E, Sec. 89, Blk. 10, H.&G.N.R.R. Sur. ..... Shut down for machine.
Warner's No. 1 Webb, 2,550 ft. from NW and 6,100 ft. from NE of Sec. 311, Abst. 756, C. McGinley Sur. .... Location.

PRESIDIO COUNTY

L. C. Brite's No. 4 Brite, 271 ft. from N and 1,188 ft. from E lines of Sec. 245, Blk. 4 ..... Shut down 1,635 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 1-C University, 2,598 ft. S and 250 ft. W of NE cor., Sec. 1, Blk. 2, University Land.. Top pay 2,903 ft.; top pay 6,807 ft.; shut down 8,654 ft.

Hagan & Emeh and Amerada's No. 1 Sawyer Cattle Co., 330 ft. from S and 990 ft. from E lines of Sec. 125, Blk. 1, T.&P. Sur. ..... Drlg. 2,590 ft.
Big Lake Oil Co.'s No. 4-C University, 1,120 ft. from N and 1,096 ft. from E of Sec. 1, Blk. 2 ..... Showing oil and gas at 8,220 ft.; total depth 8,220 ft.; flowed average of 571 bbls. per day.

Big Lake Oil Co.'s No. 5-C University, 625 ft. from S and 250 ft. from W of Sec. 25, Blk. 9 ..... Cellar.
Texon Oil & Land Co.'s No. 2-B University, 4,655 ft. from S, 250 ft. from W, Sec. 36, Blk. 9 ..... Top pay 8,131 ft.; total depth 8,131 ft.; spraying 150 bbls. daily, 16,000,000 ft. gas.

Texon Oil & Land Co.'s No. 3-B University, 2,240 ft. from S, 920 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 6,982 ft.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor., Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Shut down 2,900 ft.
H. T. Hansford's No. 1 Williams, 150 ft. from S and W, Sec. 17, Blk. 6, H.&G.N. Sur. ..... Shut down 380 ft.
Black & Fink's No. 1 Brooks, 1,980 ft. N and 660 ft. W, Sec. 16, Blk. 59 ..... Shut down 1,860 ft.; show oil 1,820 ft.; cleaning out after two shots; filled up 200 ft. with oil.

Southern Crude Oil Pur. Co.'s No. 1 Kloh-Rumsey, 2,310 ft. N and W SE cor., Sec. 23, Blk. 51 ..... Show oil 3,410-20 ft.; shut down 3,575 ft.

David R. Thompson's No. 1 A. A. Eddins, Sec. 9, Blk. C-1 ..... Shut down 5,658 ft.
California Co.'s No. 1 Kloh & Rumsey, 1,650 ft. from S and E of Sec. 13, Blk. 54, Twp. 4, T.&P. Sur. ..... Drlg. 610 ft.

RUNNELS COUNTY

Gibson & Johnson's No. 1 Johnson, 2,310 ft. N and 1,650 ft. W of SE cor., Sec. 150, E.T.R.R. Sur. ..... Total depth 2,281 ft.; underreaming casing.

Gibson & Johnson's No. 2 Serratt, 2,310 ft. from S and 1,650 ft. from E of Sec. 150, E.T.R.R. Sur. ..... Derrick.
George W. Boyce's No. 1 Lang, 2,310 ft. N, 6,900 ft. E, Sec. 262 ..... Show oil 2,028 ft.; shut down 2,504 ft.

SCHLEICHER COUNTY

Delmar Oil Co.'s No. 1 O'Harrow, C of NW, Sec. 56, Blk. 1, G.H.&S.A.R.R. Sur. ..... Shut down 3,330 ft.
Interstate's No. 1 Whitten, 1,320 ft. from N and W, Sec. 35, Blk. LL, T.C.R.R. Sur. ..... Drlg. 6,242 ft.
Teas & Gant's No. 1 Allison, 1,320 ft. N and E of SW cor. of Sec. 37, Blk. K, G.H.&S.A.R.R. Sur. ..... Drlg. 620 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,470 ft. from W, G.H.&S.A.R.R. Sur. ..... Shut down 4,750 ft.

SCURRY COUNTY

Byrd & Harmon's No. 1 Murphy, Jr., 330 ft. from N and E of Sec. 114, Blk. 97, H.&T.C. Sur. ..... Show oil 1,750 ft.; top pay 1,750 ft.; estimate 10 bbls. on pump; fishing 2,442 ft.

Camp Spring Oil & Ref. Co.'s No. 3 Guinn, 1,300 ft. from S, 300 ft. from E, Sec. 12, Blk. 3, H.&T.C.R. R. Sur. ..... Total depth 4,140 ft.
I. B. Mimms et al's No. 1 J. J. Koonsman, Sec. 216, Blk. 2, H.&T.C.R.R. Sur. ..... Spudded and shut down 300 ft.
G. E. Dickman and R. B. Pender et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... Total depth 4,400 ft.
Magnolia Pet. Co.'s No. 1 More, 1,320 ft. from S and W, Sec. 379, Blk. 97 ..... Top salt 750 ft.; encountered 500,000 ft. gas 1,510 ft.; oil show 2,215 ft.; shut down 4,650 ft.

Transcontinental Oil Co.'s No. 1 Peckham, 330 ft. from S and W of R. N. Miller Sur. ..... Cleaning out 875 ft.

SUTTON COUNTY

Independent Oil & Gas Co.'s No. 1 Wilson, Sec. 30, Blk. A, 1,650 ft. from N, 2,310 ft. from W ..... Location.

TAYLOR COUNTY

Condor Pet. Co.'s No. 1 Stoker, C of NW, Sec. 220, Blk. 64, H.T.C.R.R. Sur. ..... Total depth 2,580 ft.
A. H. Gibson et al's No. 1 Cody, 888 ft. N and 160 ft. W of SE cor., Lot 2, Sec. 18, Guadalupe County School Land ..... Plugged back 2,396 ft. and shot 60 qts. 2,374-93 ft.; cleaning out; shut down 2,467 ft.; top pay 2,370 ft.; 1,200 ft. oil in hole; running liner to test 2,436 ft.; pay 2,370-77 and 2,394-95 ft.

Gibson & Johnson's No. 1 Bingham, 330 ft. N and E of SW cor. their 270.8-ac. tract, Sec. 31, Guadalupe County School Land ..... Shut down 2,100 ft.; cem. casing.
John B. Jameson's No. 1 Webb, 1,170 ft. S and W of NE cor., Sec. 46, Lunatic Asylum Land ..... Show oil 4,917 ft.; drlg. 5,885 ft.
Hucony Oil Co. et al's No. 1 Richie, C SE Sec. 10, Blk. A, S.P.R.R. Sur. ..... Drlg. 520 ft.
Mid-Continent Pet. Corp.'s No. 1 Lindsey, 239 ft. N and 219 ft. E of SW cor., Subd. 22, Guadalupe County School Land ..... Drlg. 2,150 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW, Sec. 155, Blk. D, M.-K.-T.R.R. Sur. ..... Shut down 1,840 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C, Sec. 6, Georgetown Ry. Sur. ..... Shut down 3,150 ft.
Miller Bros.' No. 1 Allison & Burke, C NW cor., Sec. 10, Blk. 176, T.&P. Sur. ..... Shut down 120 ft.
Mrs. J. B. McPhees' No. 1 Sam Belt, C, Sec. 78, Blk. D-7, E.L.R.R. Sur. ..... Shut down 880 ft.; moved o.f machine.

Transcontinental Oil Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F.R.R. Sur. ..... Shut down 3,290 ft.
Woodley & Jones' No. 1 Pankenham, C SE NW, Sec. 43, Blk. B-2, C.C.S.D.&N.G.R.R. Sur. ..... Shut down 640 ft.

TERRY COUNTY

Atlantic et al's No. 1 Carlisle, 990 ft. from S and E of Sec. 58, Blk. E, E.L.&R.R. Sur. ..... Shut down 3,322 ft.

TOM GREEN COUNTY

Cosden Oil Co.'s No. 1 William Anson, 2,310 ft. S, 330 ft. W of NE cor., Sec. 20, Blk. 24, H.T.C.R.R. Sur. ..... Spudded
Ellis' No. 3 Lewis, 1,350 ft. S and 450 ft. E of SW cor. Jas. Webb Sur. 77 but in Albert Black Sur. 75 ..... Location.
Fitzgerald & Taliaferro's No. 1 Bennett, C SW, Sec. 1,628, E. H. Ringer Sur. ..... Plugged back to 2,405 ft. to straighten hole; shut down 2,447 ft.

Phillips Pet. Corp.'s No. 1 Guilden, 1,250 ft. from N and 1,583 ft. W of Sec. 77, James Webb. Sur. ..... Drlg. 2,185 ft.
E. W. Wiley et al's No. 1 Maler, 200 ft. from E, 110 ft. from N. Sec. 6, Blind Asylum Land ..... Show oil 418-30 ft.; total depth 632 ft.

UPTON COUNTY

Cordova Union Land Co.'s No. 1 fee, 330 ft. from S and E line of Sec. 1, Blk. 1, M.-K.-T.R.R. Sur. ..... Location.
Eppenauer Drlg. Co.'s No. 1 Chaney, 2,310 ft. from N and 330 ft. from W of Sec. 18, Blk. 3, M.-K.-T. Sur. .. Top pay 2,290 ft.; total depth 2,400 ft.; 1,200 ft. oil in hole; to shoot; plugged back to 2,382 ft.

Gulf Prod. Co.'s No. 3-B Hughes, 160 ft. N and 161 ft. W of most southerly SE cor. of its 200-ac. lease "B" out of Wm. Teer Sur. ..... Rig.
Pure Oil Co.'s No. 3 Hughes, 150 ft. S and 767 ft. E of NW of their 300 ac., Sec. 4, Wm. Teer Sur. ..... Partly rigged up; shut down.

VAL VERDE COUNTY

A. Bluhm's No. 1 Yoast, 1,760 ft. N, 600 ft. W of SE cor., Sec. 31, Blk. 3, I.&G.N. Sur. ..... Machine on ground.
Independent Operators' No. 1 Whitehead, SE SE, Sec. 30, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... Shut down 4,850 ft.
O. O. Owen's No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125,700 ft. gas; drlg. by tools 5,757 ft.

Phantom Oil Co.'s No. 1 Ingram, 175 ft. W of E line and 300 ft. N of S line, Sec. 33, Blk. D-8, E.L.&R.R. Sur.. Show oil 1,525 ft.; fishing 3,035 ft.

Valvert Oil Corp.'s No. 1 Bassett, C NE, Sec. 47, Blk. Y .. Shut down 4,009 ft.

WARD COUNTY

Anderson et al's No. 1 Boogher et al, 3,364 ft. from NE and 2,497 ft. from SE of Sec. 11, Blk. 5, H.&T.C. Sur.. Drlg. 2,030 ft.
Dearborn et al's No. 1 Boogher, 1,375 ft. NE and 785 ft. SE of N cor., Sec. 7, Blk. 32, but in Sec. 11, Blk. 5, H.&T.C.R.R. Sur. ..... Drlg. 1,775 ft.
Gulf Prod. Co.'s No. 3 Wristen Bros., 220 ft. NE of SW and 220 ft. SE of NW, Sec. 18, Blk. 5, H.&T.C. Sur.. Show gas 1,960-70 ft.; filling up with sulphur water 2,520-27 ft.; salt water 2,545 ft.; plugged back to 2,477 ft.

R. F. Owens' No. 1 Johnson, 100 ft. from NE and 1,100 ft. from SE of Sec. 8, Blk. 33, H.&T.C.R.R. Sur. ..... Shut down 380 ft.
Tex-Oil Prod. Co.'s No. 1 Redman, 1,980 ft. NE of SW line and 1,980 ft. SE of NW line, Sec. 152, Blk. 34, H.&T.C.R.R. Sur. ..... Show gas 2,806-09 ft.; drlg. 4,910 ft.

Richardson et al's No. 2 O'Brien, 322 ft. from N and 1,020 ft. from W of Sec. 5, Blk. F, G.M.M.B.&A. Sur... Drlg. 302 ft.
Shipley et al's No. 4 Hayzlett, 2,050 ft. NW of SE and 2,420 ft. NE of SW line of Sec. 17, Blk. 5, H.&T.C. R.R. Sur. ..... Fishing 3,127 ft.; 2,300 ft. oil in hole.

Shipley et al's No. 5 Hayzlett, assume ccommon line Secs. 16 and 17, is N and S, 220 ft. S and 1,910 ft. W, Sec. 17, Blk. 5 ..... Standard rig.
Shipley et al's No. 1 Monroe, 330 ft. SE SW, Sec. 3, Blk. 1 ..... Drlg. 375 ft.
J. E. Smith's No. 1 Clement, 152 ft. SW of NE line and 153 ft. SE of NW line, Lot 7, Sec. 7, Blk. 32, H.&T.C.R.R. Sur. ..... Drlg. 1,080 ft.; top salt 745 ft.
Sturm & Paine's No. 1 Cummins, 748 ft. from NE and 155 ft. from NW of Sec. 7, Blk. 32, H.&T.C.R.R. Sur... Shut down 2,350 ft.; show oil and gas 2,170 ft.; not flowing; made 125-bbl. head after standing 30 days.

Sun Oil Co.'s No. 1 Sealy, 330 ft. from N and E of Sec. 88, Blk. F, G.M.M.B.&A. Sur. ..... Shut down 2,575 ft.

WINKLER COUNTY

A. W. Phillips' No. 2 Brown et al, 2,000 ft. S and W of NE, Sec. 4, Blk. B-5, Public School Land ..... Top salt 1,300 ft.; shut down 2,832 ft.; show oil 2,775-85 ft.

Liner Drlg Co.'s No. 1 Campbell, 330 ft. from N and E cor., Sec. 2, Blk. B-5 ..... Show oil 3,670-79 ft.; shot 10 qts. from 3,670-79 ft.; no results; shut down 3,735 ft.

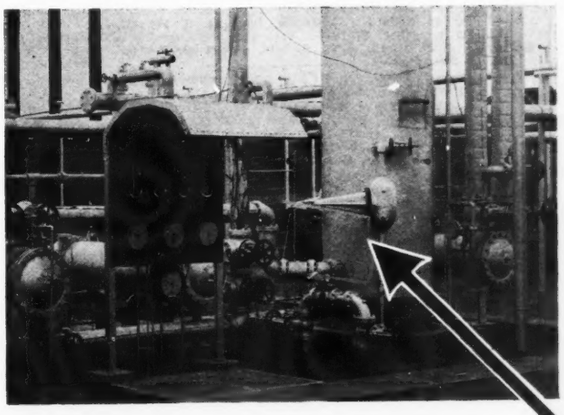
Shell and The Texas Company's No. 1-B Cowden, 660 ft. from S and W of Sec. 39, Blk. B-5, Public School Land ..... First gas 2,290 ft.; increase 2,580 ft.; total 3,500,000 ft. gas (estimated); shut down 2,741 ft.

Shell et al's No. 8 Scarborough, 1,020 ft. from N and 1,650 ft. from E of Sec. 2, Blk. 77, Public School Land ..... Shut down 2,982 ft.; show oil and gas 2,962-75 ft.

NEILAN LIQUID LEVEL CONTROLLERS

with stainless steel ball bearings and working parts at

REGULAR PRICES



In this installation a Neilan Controller is controlling the lean oil out by maintaining a constant liquid level in a newly installed fractionating still.

Remember that Neilan Liquid Level Controllers No. 88 are practically frictionless, due to the widespread use of stainless steel ball bearings in both the float chamber and the balanced lever valve. In addition, all float stems, rotating shafts, valve stems and many other parts are regularly made of stainless steel. Think how much longer these Neilan controllers will last in oilfield service where corrosive sulphur compounds are generally present.

Neilan Controllers, because of their frictionless operation, are easily actuated by the lightest liquids. Every Controller is also equipped with the Improved Slipless Lever Clamp—which will not slip and cannot vibrate loose.

For remote liquid level control, or ultra-sensitive liquid level control, use a Neilan Pilot Operated Controller No. 95. These Controllers, as well as all other Neilan equipment, are fully described in our new catalog—sent on request.

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"YOU CAN BE SURE OF NEILAN PRODUCTS"

LOUISIANA-ARKANSAS PROVEN AREAS

(Continued from Page 56)

E. W. Bateman's No. 1 Bollinger, 200 ft. S, 200 ft. E, NW cor., Sec. 38-23-11.... Cored hard sand and shale 3,095-3,104 ft.

E. W. Bateman's No. 2 Bollinger, 200 ft. S, 200 ft. W, NE cor. Lot 29, Sec. 38-23-11.... Location.

Del.-La. Dev. Co.'s No. 6 Bollinger, 330 ft. S, 220 ft. W, NW cor. Lot 17, in Lot 16, Sec. 31-23-11.... Full oil; W.O.S.R; 15 ft. broken sand; T.D. 3,217 ft.

Eylers O. & G. Co.'s No. 1 Wise, 330 ft. S, 330 ft. W, NE cor., Sec. 35-23-11.... 350 ft. oil; W.O.S.R.; T.D. 3,203 ft.

Greenwood Prod. Co.'s No. 1 Bollinger, 1,980 ft. N, 1,150 ft. E, SW cor. SE, Sec. 36-23-12.... 300 ft. oil; S.D; W.O. 3,200 ft.

H. L. Hunt's (was Love et al's) No. 1 Allen, SE cor. NE NE, Sec. 30-23-11.... W.O. 3,482 ft.

H. L. Hunt, Inc.'s No. 5 J. W. Peyton, 990 ft. W, 330 ft. S, NE cor. SE, Sec. 25-23-12.... Location.

H. L. Hunt, Inc.'s No. 7 J. W. Peyton, 990 ft. S, 990 ft. E, C, Sec. 25-23-12.... Location; reported drlg. in error.

H. L. Hunt, Inc.'s No. 8 J. W. Peyton, 990 ft. E, 330 ft. S, C, Sec. 25-23-12.... Location.

H. L. Hunt, Inc.'s No. 9 J. W. Peyton, 330 ft. S, 330 ft. E, C, Sec. 25-23-12.... W.O.S.R; 100 ft. oil; T.D. 3,222 ft.

H. L. Hunt, Inc.'s No. 10 J. W. Peyton, 990 ft. S, 330 ft. E, C, Sec. 25-23-12.... 500 ft. fluid; W.O.S.R; 3,176 ft.

La. Pet. Co.'s No. 3 Bain, Sec. 31-23-11.... Cmtd. 6-in. 3,130 ft; T.D. 3,271 ft.

Magnolia Pet. Co.'s No. 2 Matlock, 330 ft. S and W, NE cor. SE SW, Sec. 25-23-12.... Bailing to test small show oil; T.D. 3,188 ft.

Magnolia Pet. Co.'s No. 3 Matlock, 330 ft. N, 330 ft. W, SE cor. SE SW, Sec. 25-23-12.... Drlg. gummy shale 2,904 ft.

Magnolia Pet. Co.'s No. 1 Roberson, Sec. 26-23-12.... Missed D.S. test 3,131 ft.; plugged back to 2,950 ft.; arranging to shoot; T.D. 3,331 ft.

Nat. Drlg. & Prod. Co.'s (was Lide et als') No. 1 Matlock, 2,970 ft. S, 990 ft. E, NW cor., Sec. 26-23-12.... Began drlg. Apr. 30; cmtd. 10-in. 250 ft.; drlg. 2,050 ft.

Nat. Gas Prod. Co.'s No. 3 U. S. Govt., 1,520 ft. S, 2,580 ft. E, NW cor., Sec. 31-23-11.... Location.

Nat. Gas Prod. Co.'s No. 4 U. S. Govt., 2,440 ft. S, 2,580 ft. E, NW cor., Sec. 31-23-11.... Location.

The Texas Co.'s No. 1 Peyton, 660 ft. N, 330 ft. E, SW cor., Sec. 30-23-11.... O.W.D.D.; Comp. Feb. 19, 1928; 40,000,000 ft. gas; 2 ft. sand; T. D. 3,076 ft.; derrick.

The Texas Co.'s No. 2 Peyton, 990 ft. N, 330 ft. W, SE cor., Sec. 25-23-12.... W.O.S.R. 3,195 ft.

The Texas Co.'s No. 5 Peyton, 330 ft. N, 330 ft. W, SE cor., Sec. 25-23-12.... Derrick.

The Texas Co.'s No. 7 Peyton, 1,090 ft. N, 150 ft. E, C, Sec. 31-23-11.... O.W.D.D.; fishing for liner; T.D. 2,680 ft.

The Texas Co.'s No. 1 Hy. Rose, 940 ft. E. 450 ft. N. The Texas Co.'s No. 7 Wilkinson, 990 ft. N, 990 ft. E, C, Sec. 36-23-12.... Began drlg. May 2; cmtd. 10-in. 371 ft.; drlg. 1,730 ft.

The Texas Co.'s No. 8 Wilkinson, 990 ft. W, 330 ft. N, SE cor. NE, Sec. 36-23-12.... Rig up.

Tippett Drlg. Co.'s No. 2 Holmes, 990 ft. S, 330 ft. W, NE cor. NW, Sec. 36-23-12.... Cmtd. 6⅝-in. 3,140 ft.; sand 3,153-56 ft.

John Woodley et al's No. 2 L. & A., 990 ft. N, 990 ft. W, SE cor., Sec. 14-23-13.... Fishing for bailer 3,156 ft.

Woodley et al's No. 1 Roberson, 330 ft. N, 330 ft. W, SE cor. SW NE, Sec. 22-23-12.... Surface csg. collapsed; W.O; T.D. 1,500 ft.

BOSSIER PARISH—SLIGO

La. G. & F. Co.'s No. 5 Thigpen-Herold, 660 ft. S, 660 ft. E, NW cor., Sec. 13-17-12.... D.S. test 1,745 ft; 2,500,000 ft. gas; drlg. 2,264 ft.

La. G. & F. Co.'s No. 6 Thigpen-Herold, 660 ft. S, 1,980 ft. E, NW cor., Sec. 13-17-12.... Derrick.

CADDO PARISH—DIXIE

D. C. Richardson's No. 1 Oden, 330 ft. S, 330 ft. W, C, Sec. 18-19-14.... Began drlg. Apr. 25; cmtd. 10-in. 126 ft; top Nacatoch 870 ft; drlg. 2,060 ft.

CADDO PARISH—GREENWOOD

Ark.-La. P. L. Co.'s No. 1-B Brumble, 330 ft. S, 1,280 ft. E, NW cor., Sec. 18-16-16.... Drlg. lime 2,800 ft.

Chiatex O. & G. Co.'s No. 2-A Agurs, 1,325 ft. S, 1,304 ft. E, NW cor., Sec. 7-16-16.... Cmtd. 6⅝-in. 2,409 ft.; bailing to test; T.D. 2,735 ft.

CADDO PARISH—MOORINGSPORT

Falcon Oil Co.'s No. 3 Muslow, 1,220 ft. S, 1,070 ft. W, NE cor. SE, Sec. 29-20-15.... Began drlg. May 2; cmtd. 10-in. 40 ft.; drlg. 1,100 ft.

Falcon Oil Co.'s No. 4 Muslow, 200 ft. W, 1,270 ft. S, NE cor., Sec. 29-20-15.... Location.

CADDO PARISH—OIL CITY

Gulf Ref. Co.'s No. 26-A Levee Board, 2,440 ft. S, 200 ft. E, NW cor., Sec. 34-21-16.... W.O.S.R; 400 ft. oil; T.D. 1,836 ft.

Gulf Ref. Co.'s No. 27-A Levee Board, 2,005 ft. S, 200 ft. W, NE cor. NW, Sec. 34-21-16.... Began drlg. May 4; cmtd. 10-in. 115 ft.

P. T. Mize's No. 1-A La. Oil Ref. Corp., 662 ft. N, 175 ft. E, SW cor., Sec. 6-20-15.... Began drlg. Apr. 23; cmtd. 10-in. 40 ft.; cmtd. 6-in. 1,329 ft.

Standard Oil Co.'s No. 19 J. J. Hart, 1,305 ft. E. 1,-120 ft. S, NW cor., Sec. 34-21-16.... Cmtd. 6-in. 1,795 ft.; W.O.S.R. 1,836 ft.

Shreveport Oil Corp.'s No. 5 Hicks, 880 ft. N, 960 ft. W, SE cor. NE NW, Sec. 32-21-15.... Began drlg. April 30; cmtd. 10-in. 60 ft.; 6-in. 2,110 ft.

The Texas Co.'s No. 2 Leonard Fee, 1,520 ft. W, 900 ft. S, NE cor., Sec. 29-20-15.... Began drlg. April 27; cmtd. 10-in. 70 ft.; 6-in. 2,025 ft.; T.D. 2,555 ft.

The Texas Co.'s No. 3 Leonard Fee, 2,440 ft. W, 576 ft. S, NE cor., Sec. 29-20-15.... Derrick.

The Texas Co.'s No. 72 Levee Board, 725 ft. N, 210 ft. E, SW cor. SE, Sec. 27-21-6.... C.O; T.D. 1,852 ft.

The Texas Co.'s No. 73 Levee Board, 1,842 ft. E. 780 ft. N. SW cor. SW SE, Sec. 27-21-16.... Location.

CADDO—PINE ISLAND

Tholl Oil Co.'s No. 12 Bashara, 300 ft. S, 100 ft. W, NE cor. NW, Sec. 23-21-15.... Began drlg. May 6; drlg. 100 ft.

DE SOTO PARISH—KINGSTON

Ark. Fuel Oil Co.'s No. 2 Scott, 330 ft. N, 330 ft. E, SW cor. SE NE, Sec. 32-14-13.... Rig up.

Frank Melat, Inc.'s No. 1 Schryver, 175 ft. E, 175 ft. N, SW cor. NW SW, Sec. 35-14-13.... Began drlg. May 4; drlg.

R. O. Roy's No. 1 Brooks, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 8-13-13.... Derrick.

R. O. Roy's No. 1-B Farmer, 660 ft. S, 660 ft. E, NE SW, Sec. 13-13-13.... Drlg. 200 ft.

R. O. Roy's No. 1 Mattie Fuller, 330 ft. S, 330 ft. W, NE cor. SE NW, Sec. 5-13-13.... Rig up.

R. O. Roy's No. 1 Fuller & Conard, 330 ft. S, 330 ft. W, NE cor. SE, Sec. 6-13-13.... Location.

R. O. Roy's No. 1 Lee, 660 ft. N, 660 ft. E, SW cor., Sec. 33-14-13.... Drlg. 2,400 ft.

R. O. Roy's No. 1 McGee, 660 ft. N, 660 ft. W, C, Sec. 8-13-13.... Location.

R. O. Roy's No. 1-A Parker, C SW NW, Sec. 5-13-13.... Rig up.

R. O. Roy's No. 1-B Parker Bros., 660 ft. N, 660 ft. W, SE cor., Sec. 31-14-13.... Drlg. 1,750 ft.

R. O. Roy's No. 2 Tracy, 330 ft. S, 330 ft. E, NW cor. Derrick.

R. O. Roy's No. 1 Whittaker, 330 ft. S, 330 ft. E, NW cor. SW NE, Sec. 5-13-13.... Drlg. 2,000 ft.

LA SALLE PARISH—URANIA

Ark. Fuel Oil Co.'s No. 5 Urania, 200 ft. S, 200 ft. E, NW cor. NE SE, Sec. 24-10-1e.... Drlg. 6,345 ft.

Kinney, Hardtner & Randall's No. 1 Kinney, SW SW, Sec. 7-10-2e.... S.D. 1,570 ft.

MOREHOUSE PARISH

Bahan & Bahan's No. 4 Feazel, 900 ft. W, 330 ft. S, NE cor., Sec. 2-20-4.... Location.

J. S. Herkness' No. 12 Bowles, 3,392 ft. E, 3,300 ft. S, NW cor., Sec. 18-20-5.... Cmtd. 6-in. 2,615 ft; T.D. 2,737 ft.

Industrial Gas Co.'s No. 1 fee, 1,980 ft. S, 660 ft. W, NE cor., Sec. 3-20-4.... Location.

La. G. & F. Co.'s No. 26 Crossett, 645 ft. E, 574 ft. S, NW cor. Lot 9, Sec. 33-21-5.... Derrick.

La. G. & F. Co.'s No. 27 Crossett, N 67° 30 ft. E 2,079 ft; N 20° 30 ft. W 594 ft, SW cor. Lot 3, Sec. 33, in Sec. 45-21-5.... Cmtd. 6-in. 2,354 ft.

OUACHITA PARISH

Amalgamated Co.'s No. 1-B Kate Cole, 660 ft. N, 660 ft. E, SW cor. NE SW, Sec. 25-20-4.... Rig up.

Carbon Consolidated, Inc.'s No. 3 Kate Cole, 660 ft. S, 544 ft. E, C, Sec. 26-20-4.... Began drlg. April 30; cmtd. 12-in. 183 ft.; 6-in. 2,126 ft.

Carbon Consolidated, Inc.'s No. 5 Guthrie (was United Oil & Nat. Gas Co.'s No. 5 Guthrie), 6,634 ft. N, 7,078 ft. W, cor. Secs. 49, 25 and 26, in Sec. 50-20-4.... Derrick.

Hope Prod. Co.'s No. 2 Fairbanks, 1,876 ft. E, 623 ft. N, SW cor. SE, Sec. 25-20-4.... Location.

Jordan Drlg. Co.'s No. 6 Cole, 1,596 ft. W, 2,388 ft. N, SE cor., Sec. 49, in Sec. 50-18-4.... Drlg. 1,985 ft.

Jordan Drlg. Co.'s No. 7 Cole, 265 ft. S, 1,469 ft. W, NE cor., Sec. 49, in Sec. 50-18-4.... Location.

Jordan Drlg. Co.'s No. 2 Pereboom, 1,207 ft. W, 264 ft. S, C, Sec. 9-18-4.... Location.

Jordan Drlg. Co.'s No. 1 School, 216 ft. S, 244 ft. W, NE cor. NW, Sec. 16-18-4.... Location.

La. G. & F. Co.'s No. 3 Breard, S 9° 734 ft., S 81° E 594 ft., NW cor., Sec. 44-18-4.... Rig up.

Union Gas Products Co.'s No. 1 Hare, 660 ft. S, 660 ft. W, NE cor. NW, Sec. 22-19-5.... D.S. test 2,565 ft; dry; W.O.

United Carbon Co.'s No. 5 Spade, 842 ft. W, 1,758 ft. S, NE cor., Sec. 34-19-4.... Cmtd. 6-in. 2,165 ft.

United Carbon Co.'s No. 6 Spade, 1,180 ft. S, 140 ft. E, NW cor., Sec. 27-19-4.... Location.

United O. & N. G. Co.'s No. 2 Cole, 660 ft. S, 594 ft. E, C, Sec. 26-20-4.... Derrick.

RICHLAND PARISH

Ark.-La. P. L. Co.'s No. 4-B Sartor, 660 ft. S, 1,320 ft. E, NW cor. SW, Sec. 18-16-6.... Cmtd. 9-in. 2,310 ft.

W. C. Feazel's No. 1 R. B. Simon, 2,406 ft. W, 2,020 ft. S, NE cor., Sec. 11-16-6.... Rig up.

Franklin O. & G. Co.'s No. 1 Thomason, 660 ft. N, 165 ft. W, SE cor. NE, Sec. 14-16-6.... Location.

Industrial Gas Co.'s No. 1 Alexander, 760 ft. E, 27 ft. N, SW cor. SE, Sec. 4-16-6.... Began drlg. May 4; cmtd. 12½-in. 176 ft.

Industrial Gas Co.'s No. 1 Ellege, 1,320 ft. N, 660 ft. E, SW cor. SE, Sec. 4-16-6.... Location.

International Gas Prod. Co.'s No. 1 Minnie LaGrone, 769 ft. N, 858 ft. E, SW cor., Sec. 7-16-7.... Location.

Northern La. Nat. Gas Co.'s No. 1 Mulhern, 330 ft. S, 660 ft. E, NW cor., Sec. 28-16-6.... Cmtd. 6-in. 2,300 ft.

Palmer Corp.'s No. 1-B Boykin, 177 ft. S, 787 ft. E, C, Sec. 33-17-6.... Location.

Palmer Corp.'s No. 1 Louise Rhymes, 1,335 ft. N, 906 ft. E, SW cor., Sec. 32-17-6.... Cmtd. 6-in. 2,300 ft.

Palmer Corp.'s No. 6 Rhymes, 1,290 ft. S, 1,080 ft. E, NW cor., Sec. 3-16-6.... Derrick.

Palmer Corp.'s No. 8 Rhymes, 1,008 ft. E, 635 ft. S, NW cor., Sec. 33-17-6.... Cmtd. 9-in. 936 ft.; drlg. 1,268 ft.

Palmer Corp.'s No. 1-E D. R. Sartor, 495 ft. S, 660 ft. E, NW cor., Sec. 16-16-6.... Began drlg. May 2; cmtd. 15½-in. 174 ft.; drlg. 864 ft.

Pelican Nat. Gas. Co.'s No. 1 M. Chapman, 660 ft. N, 660 ft. E, SW cor., Sec. 14-16-6.... Derrick.

Richland Operating Co.'s No. 1 Godfrey, 1,980 ft. N, 1,122 ft. E, SW cor., Sec. 25-16-6.... Rig up.

Richland Prod. Co.'s No. 1 T. S. McCoy, 1,252 ft. E, 589 ft. N, SW cor., Sec. 3-16-6.... Derrick.

Richland Prod. Co.'s No. 1 Thomason, 660 ft. E, 1,320 ft. S, NW cor. SW, Sec. 22-16-6.... Cmtd. 6-in. 2,300 ft.

Southern Carbon Co.'s No. 1 W. E. Landers, 1,980 ft. N, 1,220 ft. E, SW cor., Sec. 10-16-6.... Cmtd. 6-in. 2,280 ft.

Southern Carbon Co.'s No. 1 L. S. Mulhern, 660 ft. S, 560 ft. W, NE cor. NW, Sec. 30-16-6.... Cmtd. 8-in. 828 ft.; drlg. 1,420 ft.

Southern Carbon Co.'s No. 4 E. A. and F. B. Sartor, 1,371 ft. E, 4,563 ft. S, NW cor., Sec. 18-16-6.... Began drlg. May 1; cmtd. 12-in. 175 ft., 8-in. 840 ft.

United Carbon Co.'s No. 1 Duff, 1,320 ft. N, 660 ft. W, SE cor., Sec. 15-16-6.... Began drlg. May 5; drlg. 175 ft.

United Carbon Co.'s No. 1 Landers, 1,320 ft. S, 660 ft. E. NW cor., Sec. 3-15-6.... Began drlg. May 1; cmtd. 12-in. 178 ft.

United Carbon Co.'s No. 1 Cooper, 679 ft. W, 584 ft. N, SE cor., Sec. 24-16-6.... Cmtd. 6-in. 2,280 ft.

United Carbon Co.'s No. 2 Mulhern, 660 ft. S, 750 ft. E, NW cor. NW, Sec. 30-16-6.... Cmtd. 6-in. 2,280 ft.

SABINE PARISH—PLEASANT HILL

Bridges-Clark Oil Co.'s No. 2 J. W. Guy, 330 ft. S, 330 ft. W, NE cor. SE SE, Sec. 33-10-12.... Set 6⅝-in. and packer 2,420 ft; tested dry; show gas 2,427-32 ft. and 2,447 ft.; T.A. 2,447 ft.

F. A. Bartlett, Jr.'s No. 1 Logan, 200 ft. S, 200 ft. E, NW cor., Sec. 27-10-12.... Rig up.

Standard Oil Co.'s No. 2 Ives, 330 ft. N, 330 ft. E, SW cor. SE SW, Sec. 34-10-12.... Began drlg. May 3; cmtd. 10-in. 178 ft.

SABINE PARISH—ZWOLLE

T. D. Allison's No. 1 Holliday, Sec. 31-5-12, Zwolle Townsite.... Rig up.

Allen & Thompson's No. 1 McCormick, Lot 1, Blk. 2. NW NW, Sec. 31-8-12.... Location.

Allen & Thompson's No. 1 Wall, Zwolle townsite in Sec. 31-8-12.... Cmtd. 6⅝-in. 2,159 ft.; drlg. 2,305 ft.

Bahan & Ryan's No. 1 Mischel, 1,215 ft. N, 1,169 ft. W, SE cor. SW, Sec. 32-8-12.... Bailed dry; W.O. 2,570 ft.

Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 4 Bowman-Hicks, 330 ft. N, 330 ft. W, C, Sec. 34-8-12.... Drlg. 1,225 ft.

Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 5 Bowman-Hicks, 900 ft. S, 1,400 ft. W, C, Sec. 34-8-12.... Cored sandy shale showing oil 3,200-05 ft.; W.O.

Loring Oil Co.'s (formerly Benedum & Trees') No. 7 Bowman-Hicks, 330 ft. S and W, NE cor. NW, Sec. 34-7-12.... W.O.S.R. 2,700 ft.

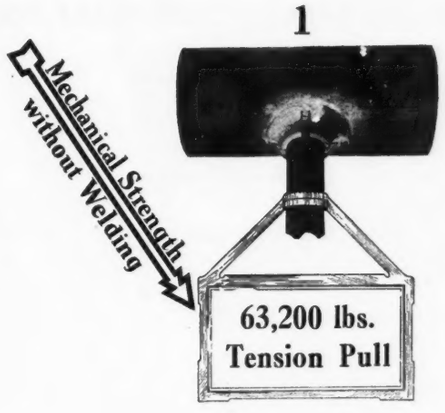
Loring Oil Co.'s No. 8 Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. SW SE, Sec. 33-8-12.... Derrick.

Loring Oil Co.'s No. 9 Bowman-Hicks, 330 ft. N, 330 ft. W, SE cor. NE SE, Sec. 34-8-12.... Began drlg. May 1; cmtd. 10-in. 704 ft.; drlg. 1,150 ft.

Tests prove ATWOOD Welded "Interlock"

Neck "*stronger* than the pipe itself."

1



2

. . . 3″ Pipe failed 9½″ beyond the outside of the 10″ pipe . . *but no failure in the weld.*

TESTS just conducted by the Pittsburgh Testing Laboratories to determine the mechanical strength (without welding) of the "Interlock" principle as well as the strength of the neck oxyacetylene welded, conclusively prove the ATWOOD "Interlock" Neck is actually "*stronger* than the pipe itself."

The ATWOOD "Interlock" Neck has been developed to meet the extreme conditions of modern high pressure lines. Its principle has been applied successfully to welded headers for every service condition . . . power plant, compressor station, refinery, river crossing, steamboat, and industrial piping generally where pressure and temperature are involved. Among the many hundreds of installations during twenty-two years . . . there *has not been a single failure.*

Report of Pittsburgh Testing Laboratory

Description of test . . . On top of a 600,000 pound test machine two saddles . . . cut, of course, to conform with its surface . . . were set on 13 3/16″ centers to support the 10″ pipe. The 3″ pipe was gripped by jaws in the lower head and tension applied.

Material . . . Seamless Steel Pipe in accordance with A. S. T. M. Specification A-106-29, Grade A. 10″ Pipe, 10-3/4″ O.D. .531 thick and 3″ Pipe 3 1/2″ O.D., .312 thick.

Results . . . Specimen No. 1 . . . "Interlock" Neck, no welding—Pipe failed at 63,200 pounds.

Specimen No. 2—With Oxyacetylene Weld—At load of 145,850 pounds, the 3″ pipe failed at a distance of 9 1/2″ beyond the outside of the 10″ pipe. No failure of the weld was noticeable.

PITTSBURGH VALVE, FOUNDRY & CONSTRUCTION CO.
PITTSBURGH ~ PENNA.

DISTRICT OFFICES

New York City	30 Church Street
Chicago, Ill.	80 East Jackson Blvd.
Boston, Mass.	185 Devonshire Street
Cleveland, Ohio	858 Rockefeller Bldg.

FOUNDERS SINCE 1825 • VALVES AND PIPING SINCE 1866 • ATWOOD

REPRESENTATIVES

Houston, Texas	Maintenance Eng. Corp.
Atlanta, Ga.	Moore-Broach Eng. Co.
Philadelphia, Penna.	R. J. Crozier Co.
Los Angeles, Cal.	John G. Bell Co.

McFarren & Pace's No. 1 Reeves, 581 ft. E, 588 ft. N, SW cor. NW, Sec. 31-8-12 ..... Rig up.
L. Nagle's No. 1 Corley, Sec. 31-8-12 ..... Began drlg. May 1; cmtd. 10-in. 102 ft.; drlg. 1,200 ft.

Joe Burnham's No. 2 Bolin, 442 ft. E, 275 ft. N, SW cor. NE, Sec. 31-8-12 ..... Began drlg. May 1; cmtd. 10-in. 101 ft.; drlg. 275 ft.

J. R. Crawford's No. 1 Pearce, 408 feet S, 200 ft. E, NW cor. SW SE, Sec. 32-8-12 ..... S.D. 1,950 ft.
Dooley & Howard's No. 1 Williams, Sec. 31-8-12 ..... Rig up.
R. T. Dudney et al's No. 1 Pearson, SE cor. Lot 3, Blk. 3, SW NW, Sec. 31-8-12, Zwolle townsite ..... Cmtd. 6⅝-in. 2,194 ft.
Dixie Oil Co.'s No. 1 Nunn, 330 ft. N, 85 ft. W, C, Sec. 32-8-12 ..... Dry 2,497 ft; W.O.S.R. 2,514 ft; 1,600 ft. oil.

Gerke et al's No. 1 Okerson, Zwolle townsite, Sec. 31-8-12 ..... Derrick.
Glassell & Merren's No. 1 Thomas, Lot 13, Blk. 3, (Zwolle townsite), Sec. 31-8-12 ..... Oil show; S.D.; W.O. 2,600 ft.
W. G. Gray, trustee's No. 1 Knowlton, 200 ft. S, 330 ft. W, NE cor. NW NE, Sec. 6-7-12 ..... Cmtd. 4½-in. 3,650 ft. (corrected depth).

G. A. Henshaw et al's No. 1-A Sabine Lbr. Co., 200 ft. N, 760 ft. E, SW cor. SE NE, Sec. 31-8-12 ..... S.D. 2,525 ft.
G. A. Henshaw et al's No. 3-A Sabine Lbr. Co., 766 ft. N, 200 ft. E, SW cor. SE NE, Sec. 31-8-12 ..... Location.
G. A. Henshaw et al's No. 1-B Sabine Lbr. Co., 150 ft. S and E, C, Sec. 31-8-12 ..... T.A. 2,640 ft.
C. L. Jett, trustee's No. 1 Jones, 150 ft. C, Sec. 31-8-12 ..... 200 ft. oil, bailing; T.D. 2,210 ft.
F. M. Hood's No. 1 Winston, 460 ft. S, 290 ft. E, NW cor., Sec. 31-8-12 ..... 1,400 ft. oil; W.O.S.R.; T.D. 2,515 ft.
Jones & Johnson's No. 1 Pearson, Sec. 31-8-12 ..... W.O.S.R; 700 ft. oil; T.D. 2,318 ft.
O'Brien Bros.' No. 1 Colquitt, 330 ft. S and E, NW cor. SW, Sec. 32-8-12 ..... Drlg. 2,535 ft; T.A. 2,575 ft.
Ohio Oil Co.'s No. 3 Bowman-Hicks, 330 ft. S and W, NE cor. SE SW, Sec. 33-8-12 ..... S.D. 2,680 ft.
Ohio Oil Co.'s No. 5 Bowman-Hicks, 330 ft. N, 330 ft. E, SW cor., Sec. 33-8-12 ..... Location.
Olsen Bros.' No. 1 Ferguson, 330 ft. N, 330 ft. E, SW cor. NW SE, Sec. 33-8-12 ..... Derrick.
Olsen Bros.' No. 1 Keeler, SW cor. SW SE, Sec. 27-8-12 ..... T.A. 2,625 ft.
W. D. Perritt's No. 1 Crow, 150 ft. N, 150 ft. E, SW cor. SE SW SW, Sec. 30-8-12 ..... Drlg. 755 ft.
Philp Bros.' No. 1 Dow, Lot 1, Blk. 18, Zwolle townsite, Sec. 31-8-12 ..... S.D.; repairing rig 1,438 ft.
Ray-Dawes Drlg. Co.'s No. 1 Mansfield Hwd. Lbr. Co., Sec. 36-8-13 ..... T.A. 2,550 ft.
Ruston Drlg. Co.'s No. 1 Bowman-Hicks, 330 ft. S, 330 ft. W, NE cor., Sec. 4-7-12 ..... T.A. 2,640 ft.
Ruston Drlg. Co.'s No. 1-A Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. SW SW, Sec. 35-8-12 ..... T.A. 2,690 ft.
Sabine Lbr. Co.'s No. 1 fee, 150 ft. N, 150 ft. W, C, Sec. 31-8-12 ..... Tested dry 2,610 ft.; S.D.; W.O.
C. E. Simmons' No. 1 Anderson, Sec. 31-8-12 (Zwolle townsite) ..... Rig up.
C. E. Simmons' No. 1 Leach, 435 ft. W, 113 ft. N, SE cor. SW NW ..... Location.
W. S. Smith et al's No. 1 Colquitt (Zwolle townsite), 500 ft. S, 480 ft. E, NW cor. SW NE, Sec. 31-8-12 ..... Derrick.
W. S. Smith et al's No. 1 Henderson, 200 ft. S, 300 ft. E, NW cor. SE SE, Sec. 31-8-12 ..... Derrick.
W. S. Smith et al's No. 1 Williams (Zwolle townsite), 804 ft. N, 40 ft. W, SE cor. SW NE, Sec. 31-8-12 ..... Rig up.
Stovall Drlg. Co.'s No. 1 Lefkovitz, 247 ft. N, 250 ft. W, SE cor. N¾ SE NW, Sec. 33-8-12 ..... Bailed dry 2,694 ft. and 2,699 ft; W.O.
A. H. Tarver et al's No. 2 Sabine State Bank, 300 ft. N, 300 ft. E, SW cor. NW, Sec. 26-8-12 ..... Derrick.
Wheatcroft et al's No. 1 Sabine Lbr. Co., SW NE, Sec. 31-8-12 ..... Derrick.

SABINE PARISH—BLUE LAKE

H. S. Autrey's No. 1 Long-Bell, 1,120 ft. S, 1,120 ft. W, NE cor., Sec. 35-8-14 ..... Tested dry 1,970 ft.; drlg. 2,200 ft.
R. L. Gay's No. 7 Bowman-Hicks, Sec. 14-7-14 ..... Hole full oil; W.O.S.R.; T.D. 2,575 ft.
R. L. Gay's No. 8 Bowman-Hicks, Sec. 18-7-13 ..... Began drlg. May 1; cmtd. 10-in. 61 ft.; drlg. 725 ft.
R. L. Gay's No. 4 Sabine Lbr. Co., Sec. 13-7-14 ..... Cmtd. 6⅝-in. 2,090 ft.; drlg. 2,500 ft.

Ruston Drlg. Co.'s No. 1-B Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor., Sec. 24-7-14 ..... Cmtd. 6⅝-in. 2,073 ft.

UNION PARISH

Greenwood Prod. Co.'s No. 1-B Guinn, 1,980 ft. N, 1,980 ft. W, SE cor. NE, Sec. 32-21-3 ..... Cmtd. 8-in. 876 ft.; drlg. 1,400 ft.
Greenwood Prod. Co.'s No. 1-C Guinn, 1,320 ft. N, 3,300 ft. W, SE cor. NE, Sec. 32-21-3 ..... Location.

WEBSTER PARISH—SAREPTA AND SHONGALOO

E. W. Bateman's No. 1 Cook, 200 ft. S, 200 ft. W, NE cor. S½ SW NE, Sec. 2-22-11 ..... Location.
E. W. Bateman's No. 2 Cook, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 2-22-11 ..... Location.
Magnolia Pet. Co.'s No. 3 Scoggins, 165 ft. N, 230 ft. W, SE cor. SW NW, Sec. 1-22-11 ..... W.O.S.R; T.D. 2,709 ft.
Ideal O. & G. Co.'s No. 1 Coyle, 300 ft. N, 300 ft. E, SW cor. SW SE, Sec. 24-23-11 ..... Derrick.
K. C. Supply Co.'s No. 1 Cochrane, 330 ft. N, 330 ft. W, SE cor. E½ NW, Sec. 36-23-11 ..... Rig up.
Merrick Oil Corp.'s No. 2 Slack, SE cor. NW, Sec. 36-23-11 ..... Derrick; No. 1 drilled by S. H. Riggs, was formerly Liggett et al's.

Mt. Vernon Oil Co.'s No. 3 Pardee, 200 ft. S, 1,500 ft. E, NW cor. NE SW, Sec. 3-22-11 ..... 1,400 ft. fluid; 6 ft. sand; W.O.S.R.; T.D. 2,653 ft.

Sarepta Oil Co.'s No. 1 Slack, SW cor. NW NE, Sec. 36-23-11 ..... Rig up.
Sarepta Oil Co.'s No. 2 Gardner, NE SW, Sec. 1-22-11 ..... Rig up.

ARKANSAS
JOHNSON COUNTY

Ark.-La. Pipe Line Co.'s No. 1 Cline, 660 ft. S, 660 ft. W, NE cor. NE SE, Sec. 16-10-24 ..... Drlg. 245 ft.
Blackwell O. & G. Co.'s No. 1 Western Coal & Mining Co., C NE SE, Sec. 20-9-25 ..... Rig up.

NEVADA COUNTY

Roy Davis et al's No. 1 Chas. Henry, 1,120 ft. N, 1,120 ft. W, SE cor., Sec. 10-12-20 ..... Rig up.
C. F. Steele's No. 1 E. W. Groves, Sec. 21-14-20 ..... S.D. 2,810 ft.

OUACHITA COUNTY—SMACKOVER

L. K. Hamilton's No. 2 Arnold & Doyle, 460 ft. E, NW cor. SE SE, Sec. 23-15-16 ..... Drlg. 1,400 ft.
J. D. Reynolds' No. 3 Berg, NE cor. SE SW, Sec. 27-15-15 ..... W.O.S.R; 200 ft. fluid 2,080 ft.
J. D. Reynolds' No. 4 Berg, 300 ft. S, 180 ft. W, NE cor. SE SW, Sec. 27-15-15 ..... Rig up.

OUACHITA COUNTY—STEPHENS

Magnolia Pet. Co.'s No. 2 Grayson, 150 ft. N, 200 ft. W, SE cor. NE, Sec. 21-15-19 ..... 100 ft. oil; plugging liner; T.D. 2,175 ft.

UNION COUNTY—CHAMPAGNOLLE

Sundby et al's No. 2 Perdue, 75 ft. S, 150 ft. E, NW cor., Sec. 33-16-14 ..... Rig up.
Root Refineries, Inc.'s No. 2 Jerry, Sec. 21-17-14 ..... Derrick.

UNION COUNTY—EL DORADO

H. L. Hunt's No. 6 Pratt, 150 ft. N, 330 ft. E, SW cor. NE NE, Sec. 7-18-15 ..... Fishing for liner 2,214 ft.

Malloy & Co.'s No. 4 Goodwin, 300 ft. N, 300 ft. E, SW cor. NE NE, Sec. 36-17-16 ..... Running sand pump; 22 ft. hard sand; T.D. 2,222 ft.
Malloy & Co.'s No. 1 Murphy, Sec. 1-18-16 ..... Rig up; W.O.
Malloy & Co.'s No. 3 Robertson, NE cor. S½ SW NE, Sec. 6-18-15 ..... Location.
Wesinger & Ball's No. 1 Rogers, 1,014 ft. N, 150 ft. E, SW cor. E½ SW SE, Sec. 31-17-15 ..... 40 ft. fluid; bailing 2,221 ft.
Woodley Pet. Co.'s No. 5 Alderson, 175 ft. S, 175 ft. E, NW cor. NW SW, Sec. 31-17-15 ..... Began drlg. April 28; cmtd. 10-in. 110 ft.; 6⅝-in. 2,150 ft.

EAST TEXAS
HARRISON COUNTY

Ark.-La. Pipe Line Co.'s No. 2 Gibson, 330 ft. N, 330 ft. W, SE cor. Gibson tract, J. Womack Sur. ..... Began drlg. May 1; cmtd. 12-in. 160 ft.; drlg. 2,248 ft.

Shell Rock Pet. Co.'s No. 1 Oliver Dougherty, W. D. Burris Sur. ..... Cored shale 2,750 ft.

PANOLA COUNTY

Ark.-La. P. L. Co.'s No. 12 Werner, 1,102 ft. N, 132 ft. E, SW cor. 15-ac. tract in E. F. Mitcheson Sur. ..... Estimated 5,000,000 ft. gas; D.S. test 3,125-74 ft; cmtd. 7-in. 3,125 ft.; bailing to test 3,174 ft.

Calatex O. & G. Co.'s No. 3 Caldwell, 243 ft. S, 1,034 ft. W, SE cor. Jno. Womack Sur. in Jas. Shadoin Sur. .. Drlg. 1,640 ft.
Nat. Gas Prod. Co.'s No. 3 Roquemore, B. C. Jordan Sur. . Tested dry 4,375 ft.; drlg. 4,400 ft.
Doris Thomason's No. 10 Crenshaw, 1,730 ft. S, 2,594 ft. W, SE cor. Jno. Womack Sur. in B. C. Jordan Sur. .. Rig up.

WILDCAT OPERATIONS IN LOUISIANA-ARKANSAS

(Continued from Page 56)

CLAIBORNE PARISH

El Dorado Chief Oil Co.'s No. 1 Dance, C SW NE, Sec. 27-20-7 ..... S.D. 2,240 ft.
Leue Oil Co.'s No. 1 Taylor, 1,153 ft. S, 360 ft. W, C, Sec. 16-22-6 ..... S.D. 2,864 ft.
Triangle Drlg. Co.'s No. 2 Caskey, 660 ft. N, 660 ft. W, SE cor., Sec. 6-19-5 ..... Began drlg. May 6; drlg.

CONCORDIA PARISH

A. C. Glassell's No. 1 Pittsfield Plantation, N 9°, E 1,320 ft., SW cor., Sec. 41-8-10 ..... Began Drlg. April 30; cmtd. 12-in. 100 ft.; drlg. 250 ft.
Joe Man et al's No. 1 Maxwell, C, Sec. 35-3n-8e ..... Drlg. sandy shale 2,790 ft.

DE SOTO PARISH

Benson Oil Co.'s No. 1 Harris, Sec. 6-10-13 ..... Tested dry; show gas; W.O. 3,650 ft.

Odell & Lawton's (was L. A. Crump's) No. 1 Harris, 300 ft. N, 300 ft. E, SW cor. NW SE, Sec. 11-13-14 .. O.W.D.D.; derrick; T.D. 3,140 ft.; D.S. stuck 700 ft.

Bud Harrell's No. 1 Horton, 450 ft. E, 150 ft. N, SW cor., Sec. 4-11-11 ..... Began drlg. April 30; cmtd. 10-in. 130 ft.; S.D. 350 ft.

H. L. Hunt's No. 1 Furman, Sec. 5-14-13 ..... Rig up.
R. O. Roy's No. 1 Nelson, 660 ft. S, 660 ft. E, NW cor., Sec. 36-15-13 ..... Rig up.

FRANKLIN PARISH

Davis et al's No. 1 Moore, 600 ft. W, 200 ft. S, NE cor., Sec. 12-11-6 ..... S.D. 1,430 ft.
Evansville Inv. Co.'s No. 1 W. B. Welch, 945 ft. E, 511 ft. N, SW cor., Sec. 2-14-8 ..... S.D. 4,200 ft.

JACKSON PARISH

El Dorado Chief O. & G. Co.'s No. 1 Sou. Advance Paper Bag Co., 225 ft. N, 275 ft. E, SW cor. SW NE, Sec. 35-15-4 ..... Derrick.

NATCHITOCHES PARISH

W. M. Coats' No. 1 Collins, 730 ft. N, 50 ft. E, C, Sec. 28-9-10 ..... Began drlg. May 3; cmtd. 12½-in. 150 ft.; S.D. for title work.

S. D. McDaniel's No. 2 Clark & Morse, 800 ft. E, 350 ft. N, C, Sec. 23-5-6 ..... Tested 1,000,000 ft. gas and S.W. 3 ft; S.D. for orders; T.D. 3,526 ft.

Robeline O. & G. Co.'s No. 1 Winn, 558 ft. N, 348 ft. E, SW cor. SE, Sec. 7-8-9 ..... S.D. 1,600 ft.

RAPIDES PARISH

Ayers Bros.' No. 1 Wickliff, 2,790 ft. N, 150 ft. E, SW cor., Sec. 9-5n-2e ..... S.D. for fuel 2,650 ft.

RED RIVER PARISH

W. D. Ball's No. 1 Krumholtz, 660 ft. S, 660 ft. E, NW cor., Sec. 32-14-10 ..... Tested S.W. and show oil 6 ft. sand 1,700 ft.; W.O.

E. C. Lucas' No. 1 La. Pecan Co., Sec. 26-13-11 ..... Began drlg. May 6.

RICHLAND PARISH

Austin & McDonald's No. 1 Hunt, 594 ft. N, 660 ft. E, SW cor., Sec. 13-17-5 ..... Derrick.
Austin & McDonald's No. 2 Millsaps, SW cor., Sec. 17-17-6 ..... Waiting orders; T.D. 2,657 ft.
Austin & McDonald's No. 3 Millsaps, 1,980 ft. S, 660 ft. E, NW cor., Sec. 16-17-6 ..... Tested S.W; W.O. 2,477 ft.
Austin & McDonald's No. 4 Millsaps, NW cor., Sec. 16-17-6 ..... Location.
Austin & McDonald's No. 5 Millsaps, 2,640 ft. N, 1,320 ft. W, SE cor., Sec. 8-17-6 ..... Derrick.
W. C. Feazel's No. 1 Landrum, 620 ft. N, 4,573 ft. E, SW cor., Sec. 6-16-7 ..... Derrick.

SABINE PARISH

Longoria et al's No. 1 Belton, 330 ft. S, 330 ft. E. C. NE, Sec. 31-9-13 ..... Rig up.
Loring Oil Co.'s No. 1 Peavy-Wilson Lbr. Co., 200 ft. S, 330 ft. W, NE cor. SW NE, Sec. 21-6-13 ..... Coring gummy shale 816 ft.
Lohman et al's No. 1 Wyatt Lbr. Co., 150 ft. S, 330 ft. E, NW cor. NE SW, Sec. 18-4-11 ..... Derrick.
J. C. McDaniel & Lieber's No. 1 Batson, 675 ft. N, 318 ft. E, SW cor. SE, Sec. 16-18-12 ..... Drlg. 1,645 ft.
Ohio Oil Co.'s No. 1 Acct. 2, Bowman-Hicks, 275 ft. N, 330 ft. W, SE cor. NE SE, Sec. 6-7-13 ..... Cmtd. 6⅝-in. 2,070 ft; drlg. 2,260 ft.
Paramount O. & G. Co.'s No. 1 Woolems, 330 ft. N, 330 ft. W, SE cor. NE NW, Sec. 11-6-12 ..... S.D. 1,656 ft.
Pelican O. & G. Co.'s No. 1 La. Long Leaf Lbr. Co., 215 ft. N, 30 ft. E, SW cor. NW SE, Sec. 4-7-11 ..... 150 ft. oil in hole; T.D. 2,425 ft; pumped 35 bbls.; S.D.; pulling rods.

Pelican O. & G. Co.'s No. 2 La. Long Leaf Lbr. Co., C NE, Sec. 20-7-12 ..... Began drlg. May 1; cmtd. 12½-in. 95 ft.; drlg. 1,000 ft.

Pelican O. & G. Co.'s No. 1 Sabine Lbr. Co., 330 ft. S, 330 ft. E, NW cor. NE SW, Sec. 1-7-12 ..... Show oil; W.O. 2,580 ft.
D. H. Riddick's No. 1 Scretchfield, 400 ft. E, 400 ft. N, SW cor. NW SE, Sec. 18-9-12 ..... S.D. 2,590 ft.
San Miguel Oil Corp.'s No. 1 Blankenship, 660 ft. N, 660 ft. E. SW cor. SE, Sec. 20-9-11 ..... Derrick.
Teteco Oil Corp.'s No. 1 La. Long Leaf Lbr. Co., 325 ft. S, 100 ft. W, NE cor. NW, Sec. 18-6-12 ..... Began drlg. May 3; drlg.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... Drlg. 1,760 ft.

UNION PARISH

Bahan & Bahan's No. 1 J. West, 660 ft. N, 660 ft. E, SW cor. SE, Sec. 33-23-3 ..... Drlg. 2,430 ft.
Fred Stovall's No. 1 Stovall, 1,320 ft. E, 350 ft. N, SW cor., Sec. 32-23-4 ..... Rig up.

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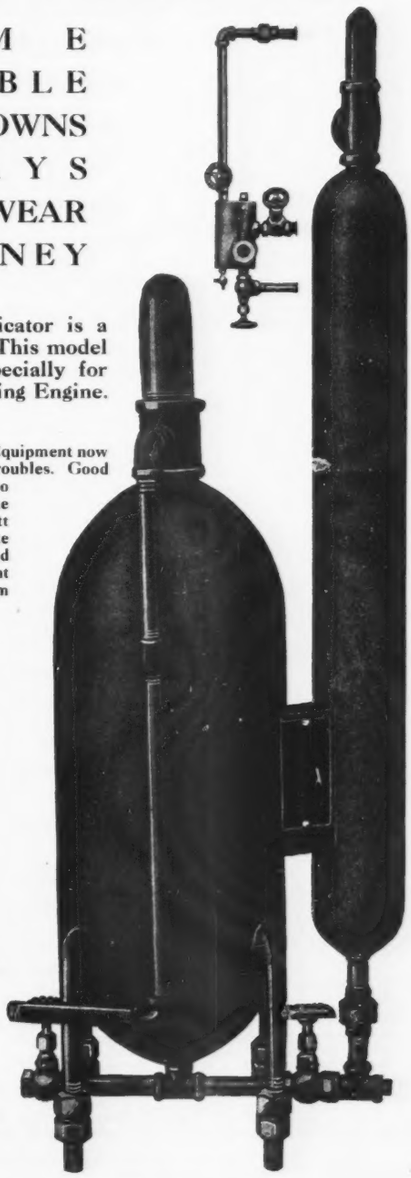

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WEBSTER PARISH

J. J. Kean's No. 1 Monzingo (was F. M. Fuller's), 200 ft. N, 200 ft. W, SE cor., Sec. 17-18-8.....Bailing; no show; T.D. 1,698 ft.

WEST CARROLL PARISH

Falmer Corp.'s No. 1-A Marston, 1,320 ft. S, 89° 35' W, 1,320 ft. of SE cor., Sec. 11-19-10.....Drlg. 2,784 ft.

ARKANSAS

ASHLEY COUNTY

J. D. Marcum Co.'s No. 1 McGarry, 300 ft. W, 100 ft. S, C, Sec. 10-19-4.....O.W.D.D; arranging to deepen; T.D. 3,300 ft.

CALHOUN COUNTY

Tidal Oil Co.'s No. 1 Freeman-Smith Lbr. Co., 150 ft. C, S line, NE NW, Sec. 3-16-14.....Derrick.

CLEBURNE COUNTY

Cosden Oil Co. of Ark.'s No. 1 Donophan, 100 ft. S, 660 ft. E, NW cor. SW SE, Sec. 19-9-10.....Drlg. 3,030 ft.

Donnelly-Craver et al's No. 1 Doniphan Lbr. Co., SE cor. NW, Sec. 33-11-9.....Drlg. 775 ft.

COLUMBIA COUNTY

Parker et al's No. 1 Franks, 330 ft. S, 330 ft. W, C, Sec. 25-19-22.....S.D. 2,835 ft.

DREW COUNTY

McClintock & Goodka's No. 1 Ogles, 920 ft. W, 400 ft. S, NE cor., Sec. 35-13-5.....Washing to bottom; T.D. 2,619 ft.

FRANKLIN COUNTY

Red Bank Oil Co.'s No. 1 Edtin, SW cor., Sec. 33-10-26..Drlg. 508 ft.

GARLAND COUNTY

Givens et al's No. 1 Garrett, 660 ft. S, 660 ft. W, C, Sec. 1-3-19.....S.D; W.O. 3,604 ft.

LITTLE RIVER COUNTY

A. L. Buck's No. 1 Greason, NW NW, Sec. 25-12-32.....Coring sandy lime 2,376 ft.

McDonald & Shaw's No. 1 W. E. Black, 240 ft. N, 450 ft. W, SE cor. SE NE, Sec. 12-13-28.....Arranging to set 6⅝-in; T.D. 2,180 ft.

LOGAN COUNTY

J. H. Flowers' No. 1 J. H. White, Sec. 13-6-26.....O.W.D.D; comp. 3,610 ft; U.R. 3,610 ft.

M. W. Greeson's No. 1 C. S. Parke, 330 ft. N, 330 ft. W, SE cor., Sec. 21-8-24.....Cmtd. 6-in. 950 ft; drlg. broken shale 1,825 ft.

OUACHITA COUNTY

Anderson & Wimmer's No. 1 Buck, Sec. 7-15-17.....Reported junked and abd; C.O; T.D. 2,727 ft.

PIKE COUNTY

Theo. Davis, trustee's No. 1 Ruth Wilson, 200 ft. S, 200 ft. W, NE cor., Sec. 25-5-26.....Fishing 700 ft; S.O.

POPE COUNTY

Ark.-La. P. L. Co.'s No. 1 Crotta, 660 ft. S, 660 ft. W, NE cor. SW NE, Sec. 16-9-21.....Cmtd. 7-in. 1,256 ft.

Cosden Oil Co.'s No. 1 Mo. Pac. R.R., 660 ft. N, 660 ft. E, SW cor. NW SE, Sec. 13-9-19.....Cmtd. 8¼-in. 3,812 ft.; drlg. 3,863 ft.

ST FRANCIS COUNTY

Brownlee Drlg. Co.'s No. 1 Whitted, 110 ft. N, 110 ft. E, SW cor. SE NW, Sec. 28-4-1.....Drlg. 2,307 ft.

UNION COUNTY

Ark. Nat. Gas Corp.'s No. 1 Burns, 330 ft. E, 400 ft. N, SW cor. NE NW, Sec. 14-18-17.....Rig up.

Carter et al's No. 1 Burnside, 320 ft. W, 150 ft. S, NE cor. SE NE, Sec. 13-18-14.....Rig up.

S. B. Hickman's No. 1 Hogg, 330 ft. S, 150 ft. E, NW cor. SE SE, Sec. 35-16-17.....Began drlg. Apr. 25; cmtd. 10-in. 100 ft.

H. L. Hunt's No. 1 Trummell, 240 ft. S, 330 ft. E, NW cor. SW NW, Sec. 28-18-12.....Began drlg. May 5; drlg.

Lion Oil Ref. Co.'s No. 1 Ballard, 330 ft. N, 330 ft. W, SE cor. SW NW, Sec. 10-18-13.....Cored red beds 4,284 ft.

Marine Oil Co.'s No. 2 Simmons, 300 ft. N, 300 ft. E, SW cor. SE NW, Sec. 10-18-13.....Rig up.

Marine Oil Co.'s No. 3-B Winn, 330 ft. S, 330 ft. W, NE cor., Sec. 10-18-13.....Rig up.

Modisette Drlg. Co.'s No. 4 Union Sawmill, 300 ft. W, 300 ft. N, SE cor., Sec. 14-18-14.....Location.

J. W. Olvey's No. 1 G. G. Simmons, 288 ft. S, 288 ft. W, NE cor. NE NW, Sec. 15-18-13.....Tested 5 joints mud and oil 2,228-80 ft; S.W. 2,483-2,515 ft; coring 3,232 ft.

Simms Oil Co.'s No. 1 G. G. Simmons, 200 ft. S, 200 ft. W, NE cor. SW, Sec. 10-18-13.....Cmtd. 8¼-in. 3,521 ft.; 1 ft. sand 3,526-7 ft.

Southern Crude O. P. Co.'s No. 1 Oliver, 330 ft. N, 330 ft. W, SE cor. NW NE, Sec. 11-18-13.....Drlg. 1,110 ft.

South El Dorado Oil Co.'s No. 1 Traylor, 330 ft. N, 138 ft. W, SE cor. NW NE, Sec. 9-19-15.....Began drlg. May 5; drlg.

VAN BUREN COUNTY

Glenn Cole et al. trustee's No. 1 Scanlan, 200 ft. S, 200 ft. W, NE cor. SE NW, Sec. 5-19-13.....S.D. 50 ft.

WASHINGTON COUNTY

Delbert & Graves' No. 1 Cunningham, Sec. 14-15-32.....S.D; W.O. 602 ft.

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30.....Trying to kill wtr. flow 3,150 ft; hard sand showing oil 1,637-40 ft.

Lincoln Leaseholding Synd.'s No. 1 Lincoln, Sec. 30-15-32.....U.R. 8-in. to T.D. 1,500 ft.

WHITE COUNTY

Letona Synd.'s No. 1 Letona, SE cor. NW SW, Sec. 35-9-8.....Pulled 5 3/16-in; S.D; W.O; T.D. 3,650 ft.

YELL COUNTY

Tegmeir & Luckett's No. 1 Falcon, Sec. 36-1-21.....Cmtd. 6⅝-in. 3,637 ft; 5 3/16-in. 3,710 ft.

EAST TEXAS

CAMP COUNTY

Rogers et al's No. 1 Enfelt, R. M. Montgomery Sur.....Tested dry 1,870 ft; S.D. 1,920 ft.

MARION COUNTY

H. L. Hunt's (was R. E. Davidson's) No. 1 Susie Chapman, Jackson-Grayson Sur.....Drlg. 3,190 ft.

P. E. Hussey's No. 1 A. A. Trammell, Chas. Lockhart Sur.....Derrick pattern.

RED RIVER COUNTY

D. M. Buffington's No. 1 Hossler, E. Hughhart Sur.....S.D. 2,365 ft.

Shad Harper's No. 1 W. R. Garland, J. Wagley Sur.....S.D. 1,862 ft.

Johnson Pet. Co.'s No. 2 Randolph, Edw. Dean Sur.....S.D. 2,182 ft.

SHELBY COUNTY

Loring Oil Co.'s (formerly Benedum & Trees Oil Co.'s) No. 1 McCann, D. G. Green Sur.....Coring 4,065 ft.

Chapperall Oil Co.'s No. 2 Holt, Matthew Moore Sur...D.S. test 10-ft. sand 3,736-46 ft; dry; D.S. test 3,004 ft.; dry; drlg. 3,030 ft.

MISSISSIPPI

ALCORN COUNTY

Alcorn Pet. Co.'s No. 1 Matthews, SE cor., Sec. 14-2s-7e..Fishing 6-in. and tools 2,393 ft; T.D. 2,735 ft.

CHICKASAW COUNTY

Hightower & Golson's No. 1 Flemming, NE cor., Sec. 20-13-3.....Driving 8¼-in. 1,400 ft.

HINDS COUNTY

Oscar Brown's No. 1 Riverside (formerly Hennessee et al's), SE cor. SE SW, Sec. 23-16-5.....Set 12½-in. 30 ft; S.D. 1,050 ft.

Cane River Oil Co.'s No. 1 Lufkin, Sec. 15-5-1e.....Derrick.

Dome Oil Co.'s No. 1 Elton, Sec. 5-4-1e.....Claim oil sand 818-24 ft; arranging to cmt. 9-in. 818 ft.

Jackson Oil Co.'s No. 1 Central Cotton Oil Co., Sec. 3-5-1e.....Derrick.

Jackson O. & G. Co.'s No. 1 Taylor, C, Sec. 35-6-1e.....D.S. stuck; T.D. 2,900 ft.

La. G. & F. Co.'s No. 1 Harris, Sec. 35-6-1e.....Cmtd. 8¼-in. 2,506 ft; cored chalk 2,521-31 ft; bailing to test.

Love O. & G. Co.'s No. 1 Bridges-Hilzim, 870 ft. N, 920 ft. W, SE cor., Sec. 35-6-1e.....Began drlg. Apr. 28; W.O.

Love O. & G. Co.'s No. 1 Mendoza, Sec. 11-5-1e.....Tested 7,000,000 ft. gas 2,446 ft; W.O.

Magnolia State Oil Co.'s No. 1 Brown, Sec. 19-6-1e.....Derrick.

Progressive Oil Co.'s No. 1 Mayes, Sec. 2-5-1e.....Derrick.

Mrs. Reeder et al's No. 1 State, SE cor. NW NW, Sec. 25-6-1e.....W.O; T.D. 2,905 ft.

Tri-State O. & G. Co.'s No. 1 Wilson, Sec. 23-6-1e.....Derrick.

J. A. Weir et al's No. 1 Holliday & Ross, NW SE, Sec. 8-6-2e.....Derrick.

HUMPHREYS COUNTY

E. S. Steele et al's No. 1 C. B. Box, SE cor. SE NE, Sec. 25-14-4w.....Set 12½-in. 60 ft; S.D.

LAUDERDALE COUNTY

Lauderdale O. & G. Co.'s No. 1 Lackey, 990 ft. S and E, NW cor. NE, Sec. 2-7-16.....Cored hard sand 3,084-87 ft.

Meridian O. & G. Co.'s No. 1 Hauser, Sec. 33-8-18.....S.D; W.O; sandy shale 2,826 ft.

J. R. Smith Oil Co.'s No. 1 C. F. Craig, Sec. 2-16-14.....Derrick.

LAFAYETTE COUNTY

Banks-Goode et al's No. 1 May, 113½ rds. S, 26 rds. E, NW cor. SW, Sec. 22-10-1w.....Derrick.

LINCOLN COUNTY

Lincoln O. & G. Co.'s No. 1 Pat Case, NE NE, Sec. 21-8-6.....S.D; W.O. 2,221 ft.

MONROE COUNTY

Amory Dev. Co.'s No. 1 Bourland, Sec. 2-13-19.....S.D. 2,912 ft; bailer lost in hole.

Amory Pet. Co.'s No. 1 Hall, Sec. 8-13-19.....Shot 2,402-18 ft; small show oil; arranging to shoot 2,387-95 ft.

Park Bowser et al's No. 1 Cowart, second hole, Sec. 2-12-19.....S.D. 30 ft.

RANKIN COUNTY

Gulf Ref. Co.'s No. 1 Rainey, NW NW, Sec. 13-5-1e.....D.S. test 2,510-15 ft; oil and S. W; reaming; to set 9-in. 2,500 ft.

R. A. More et al's No. 1 Interior Lbr. Co., Sec. 28-6-1e..Drlg. 900 ft.

WARREN COUNTY

El Dorado Oil Co.'s No. 1 Dornbush, Sec. 8-18-15.....S.D. 2,475 ft; 2,350 ft. D.S. in hole; W.O.

YALOBUSHA COUNTY

Carter Oil Co. and J. D. Collett's No. 1 Blackmur, 330 ft. S, 990 ft. W, Sec. 14-11-4.....Cored hard sandy shale 2,434 ft; claim small show gas.

YAZOO COUNTY

Amerada Pet. Corp.'s No. 1 Doherty, SW SW, Sec. 24-12-2.....Drlg. sandy lime 5,183 ft.

ALABAMA

LAMAR COUNTY

Briggs & Knapp's No. 1 Wefel, Sec. 25-12-14.....T.A. 1,740 ft.

LAUDERDALE COUNTY

A. D. Morton et al's No. 10 O'Neal est., Sec. 8-2s-13w..Cmtd. 12½-in. 125 ft; drlg. hard lime 905 ft.

MARION COUNTY

Hobson et al's No. 1 John Clark, SE, Sec. 29-11-14.....Derrick pattern.

WASHINGTON COUNTY

S. A. Hobson's No. 1 Hobson Bros., Sec. 9-8-2.....S.D; S.W. flow at 1,450 ft.

S.A. Hobson's No. 1 Wilson, Sec. 27-7-1.....Fishing bailer; T.D. 881 ft.

Oscar Brown's No. 2 Land & Cotton Co., Sec. 25-3-2w...Drlg. 700 ft.

WILDCAT OPERATIONS IN SOUTHWEST TEXAS

(Continued from Page 54)

BEXAR COUNTY

Moore-Jauer's No. 1 Holly R. Ellison.....T. D. 2,098 ft.; underreaming 5 3/16-in. csg.

CALDWELL COUNTY

Herb. Morgan's No. 1 O. Perry, 2,600 ft. S line, 3,850 ft. W line of survey in the John D. Ranes Sur., 2 miles NE from Bruner Pool.....T. D. 2,740 ft.; top Edwards.

Trinity Drillers' No. 1 McMullen, 2,125 ft. from NE line, 150 ft. from NW line of Sur., Gibson Betty Sur.....T. D. 3,364 ft.; drlg. in lime.

DEWITT COUNTY

Gibson & McIntyre's No. 1 William Van Roeder.....T. D. 1,480 ft.; shut down.

Republic Prod. Co.-Simms Pet. Corp.'s No. 1 E. T. Clark 778-ac., 1,450 ft. from SE line, 7,500 ft. from SW line of tract in the Jose Santos, 4 miles S from Yorktown.....T. D. 3,340 ft.; drlg. in broken shale.

Louisiana Oil & Ref. Co.'s No. 1 William Kleavermann 100-ac., 400 ft. out of the NE cor. of tract, 3 miles SW of Nordheim near Karnes County line in the Robert Galletty Sur.....Spudded in.

H. T. Roe's No. 1 Leinhardt.....T. D. 2,215 ft.; drlg. in shale and lime.

DUVAL COUNTY

T. W. Callahan and W. M. Howard's No. 1 J. M. Luby, 3,960 ft. N line, 3,960 ft. W line Sur. 24.....T. D. 1,850 ft.; drlg. sand 1,836-62 ft.; tested fresh water.

Southern Crude O. P. Co.'s No. 1 John Dinn, 3,450 ft. S line, 119 ft. W line of Sur. 480.....T. D. 2,927 ft.; sand 2,922-27 ft.; tested salt water.

Southern Oil Co.'s No. 1 Welder Wood, Sur. 216.....T. D. 1,700 ft.; drlg

EDWARDS COUNTY

Phillips Pet. Corp.'s No. 2 A. G. Holman, 330 ft. from N and E lines of SE of tract, C.C.S.D.&N.G.R.G Sur. No. 25.....T. D. 1,005 ft.; drlg in lime rock.

Griffith's No. 1 Wardlaw, 150 ft. from S line, 1,505 ft. from Sec. 60, Blk. US. J. J. Clift Sur.....T. D. 3,000 ft.; shut down, contract depth.

FRIO COUNTY

Walton & North's No. 1 Trebble, 150 ft. N line, 150 ft. E line, Sec. 64, in the Henry Castro Sur.....T. D. 3,560 ft.; shut down.

FAYETTE COUNTY

Kelly et al's No. 1 E. M. Burke, in the C. J. A. Weaver Sur.....T. D. 488 ft., shut down.

Moore et al's No. 1 Kerr, 250 varas S of CNL of M Muldoon lease.....T. D. 2,485 ft.; shut down.

Muldoon Oil Co.'s No. 1 J. A. Kerr, 2,900 ft. from S. 3,250 ft. from W of M. Muldoon Sur., 2 miles W of Muldoon.....T. D. 2,510 ft.; drlg. in sandy shale.

GOLIAD COUNTY

Humble Oil & Ref. Co.'s No. 1 Lackey & Weldon, 2,000 ft. from SE and SW lines of the Lackey & Weldon 1,000-ac. tract out of the most SW cor. thereof, in the Javiano Gomez Sur.....T. D. 3,960 ft.; tested salt water on drill stem test; shut down.

Wm. F. Morgan's No. 1 Peirrie, 7,600 ft. SW of NE line, 2,550 ft. SW of NW line of Fannie Peirrie 2,350-ac. tract, SW part of county in the Vincente Ramon Sur.....T. D. 450 ft.; set 450 ft. 10-in. surface csg.; W.O.C.

GONZALES COUNTY

Acme Oil & Royalty Corp.'s No. 1 Weber, Thomas Wright Sur.....T. D. 2,350 ft.; shut down.

Fitzsimmons & Perrinot's No. 1 Z. Huber, 2,100 varas from NW line, 1,450 varas from NE line (river) of survey, 2¾ miles SE of Darst Creek, in Stephen Smith Sur.....T. D. 3,220 ft.; drlg. in lime rock.

A. J. Keiffer et al's No. 1 B. B. Dix, 5,550 ft. W of E line, 2,775 ft. N of S line (Guadalupe River) in the Ira Nash Sur., 4 miles SE from Darst Creek.....T. D. 2,800 ft.; fishing for stuck drill stem.

ANNUAL PIPE LINE ISSUE — — JUNE 5th

Have You Reserved Space In The Annual Pipe Line Issue June 5th ?

Extra Pipe Line Maps

The Oil and Gas Journal's large wall maps, showing all oil trunk pipe lines and all natural gas trunk lines in the United States, have been brought up-to-date and will be published as a feature of the Annual Pipe Line Issue of June 5th.

The oil trunk pipe line map of The Oil and Gas Journal has been the stand-by of the petroleum industry since it was first compiled and printed in 1926. It is made possible through the active co-operation of all oil pipe line companies that furnish The Oil and Gas Journal authentic maps of their systems.

The natural gas pipe line map, printed on the reverse side of the one showing oil pipe lines, is the only one published showing sizes of lines and names of owning companies. This also is compiled through the co-operation of the natural gas pipe line companies.

So great has been the demand for these maps in the past that this year additional copies will be printed on extra heavy bond paper, and will be available—as long as the supply lasts—at fifty cents per copy. Maps will be mailed to those ordering same (in mailing tubes) postage prepaid. Order today extra copies desired.

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Atibus et al's No. 1 C. Martin, 268 ft. from N line, 2,650 ft. W line 210-ac. tract in the M. A. Williams Sur. ..... T. D. 2,020 ft.; drlg. in sandy shale.

Finnell & Elam's No. 1 J. F. Robinson, 2,000 ft. N line, 4,420 ft. E line, in the J. H. Livergood, 2½ miles NE from Waelder ..... T. D. 2,000 ft.; drlg. in sandy shale.

GUADALUPE COUNTY

Grayburg Oil Co.'s No. 2 Wells, 5,730 ft. E line, 2,490 ft. S line of NE cor. of Wells tract in the James D. Baume Sur., 6 miles SW from Darst Creek ..... Laying water line.

Hadley et al's No. 1 Hartwig, 2,000 ft. S-N line, 930 ft. E-W line of survey, Wm. Hartung 656-ac. in the Richard Nixon Sur., 6 miles SW from Darst Creek .. Moving in.

Morgan Lewis et al's No. 1 Link (80 acres), 2,780 ft. E of SW line (Guadalupe River), 835 ft. from NW line of Link 80-ac. tract in the A. M. Esnaurrizar Sur., 7 miles NW from Seguin ..... T. D. 640 ft., drlg. in chalk.

Mid-Kansas Oil Co.'s No. 2 Waldrop, 750 ft. E from E line, 1,950 ft. from N line 330-ac. tract in the George Allen Sur., near Staples ..... Location.

Suttle et al's No. 1 A. Baenziger, 150 ft. from SE cor. of 125-ac. tract in the A. O. Mansola Sur., 5 miles S from Seguin ..... T. D. 1,820 ft.; drlg. in chalk.

Tidal Oil Co.'s No. 1 J. Seilligman, 150 ft. from N and E lines of the J. Seilligman 40 ac. NW cor. of J. H. Williamson Sur., 15 miles S from Seguin ..... T. D. 242 ft.; set surface csg.

JACKSON COUNTY

The Texas Company's No. 1 Mitchell, 1,750 ft. E. 880 ft. N of SW cor. Ewing Sur. ..... Spudding in.

JIM WELLS COUNTY

E. W. Ogden's No. 1 G. Farris, M. Perez Sur. ..... T. D. 2,615 ft.; shut down.

KARNES COUNTY

Hewitt et al's No. 1 H. N. Matula, 450 ft. from E and center of NW and SE lines of 125-ac. farm in the Victor Blanco Sur. ..... T. D. 4,000 ft.; shut down.

J. F. Morrisey et al's No. 1 Ragsdale, 660 ft. SW of C of NE line of 170-ac. farm in the McCoull Sur. .... Derrick.

Mundine Investment Co.'s No. 1 A. D. Wilburn, C of 143 ac. in H. K. Hardy Sur., 3 miles SE from Dunge ..... Location.

Hewitt et al's No. 1 W. E. Porter ..... T. D. 3,650 ft.; shut down.

KENDALL COUNTY

Borgett et al's No. 1 Haag, W. Avery Sur. ..... T. D. 728 ft.; csg. parted at 325 ft.

Sitten et al's No. 1 Garvin, C of NE of D. L. Richardson Sur. in the D. L. Richardson Sur., 1 mile NE from Kendalia ..... T. D. 400 ft.; sandy lime; shut down.

Dickinson et al's No. 1 Edmondson, 150 ft. from S line, 350 ft. from W line of tract in the J. O. Blair No. 72 Sur., 1 mile NW from Kendalia ..... Moving on.

Seaboard Oil & Gas Co.'s No. 1 W. Asken, SW cor. of Sur. in the Miguel die Toro Sur., 3 miles N from Sisterdale ..... T. D. 1,090 ft.; drlg. in black shale.

Dixon Oil Co.'s No. 1 Ottmer Behr, W of H.T.&B.R.R. Sur., 3½ miles SE from Sisterdale ..... T. D. 1,050 ft.; setting 8-in. csg.; hole full water.

KERR COUNTY

Mashe & Tunstill's No. 1 Love Ranch, 1,000 ft. from W line of Sec. 1,594, 100 ft. S of S line of Sec. 1,597, in the G.C.S.D.&R.G.N.G. Sur. ..... Moving in.

KINNEY COUNTY

Magnolia Petroleum Co.'s No. 1, SE cor. of Bladz Sur., near S.P.R.R., close to Blume test on Wardlow ranch, W part of county, 2½ miles from Blume .... T. D. 1,330 ft.; drlg. in lime rock.

A. Blume et al's No. 2 Herbst, 1,731 ft. W and S lines of Sur., in the Poindexter-Burns Sur. ..... T. D. 200 ft.; drlg. in lime.

Mardon Oil Co.'s No. 2 Jim Clamp, in the John Winter Sur. No. 346, near No. 1 ..... T. D. 1,400 ft.; shut down.

LASALLE COUNTY

Salt Lake City Pet. Co.'s No. 1 Beckwith, Sur. 17, 150 ft. S line, 150 ft. E line ..... T. D. 2,900 ft.; fishing.

LAVACA COUNTY

McElreath & Suggett's No. 1 Julius Heinshohn, 361 ft. to E. 523 ft. to S line of farm, in the G.W.&W.H. Sur. ..... T. D. 3,740 ft.; coring a sand.

LIVE OAK COUNTY

Simmons Oil Co.'s No. 1 Richard Coquat, in James C. Hill Sur., 2,250 ft. to S line, 1,750 ft. to E line, 7 miles NE of Oakville ..... T. D. 4,012 ft.; shut down; awaiting orders.

Dougherty et al's No. 1 Jim Dougherty, 2,254 ft. SE of NW line, 750 ft. NE of SW line of M. Boren Sur. .... Preparing to spud.

MAVERICK COUNTY

Rycade Oil Corp.'s No. 6 Chittim, 1,445 ft. from S. 320 ft. from W of Sec. 116, Blk. 7, L&G.N. Sur. ..... T. D. 2,636 ft.; shut down.

Rycade Oil Corp.'s No. 5 Chittim, 600 ft. W of No. 3 Chittim, 500 ft. E line, 225 ft. from S line of SE Sec. 115, Blk. 7, in the L&G.N. Sur. ..... T. D. 3,490 ft.; drlg. in lime.

Rycade Oil Corp.'s No. 5 Sullivan, in C of Sec. 82, Blk. 7, in the L&G.N. Sur. ..... T. D. 4,630 ft.; drlg. in gray lime.

MEDINA COUNTY

Pat Armstrong's No. 1 C. W. Butts, in George C. Hanson Sur. ..... T. D. 1,300 ft.; drlg.

Pan American Pet. Co.'s No. 1 Antoine Hart, in Harrison Sur. No. 799, 15 miles S from Hondo ..... T. D. 1,050 ft.; drlg.

National Oil Co.'s No. 1 Howard, 1,750 ft. E of W line, 1,854 ft. N of S line of survey in the John George Sur. No. 9, 10 miles S of Dunlay ..... Rigging up.

Pearson Oil Co.'s No. 5 Medina Irrigated Lands, 1,506 ft. W of E line, 1,800 ft. N of S line of survey, Lot 3, 100 ft. E of No. 4 in the J. S. Palmer Sur. ..... T. D. 922 ft., temp. abandoned.

Donaldson Oil & Dev. Co.'s No. 2 Adams Co., James Hillenmeyer No. 25 Sur., 500 ft. to E line of Sur., 150 ft. to S line of N half of Sur. ..... Rig up.

Pat Armstrong's No. 1 Crawford, 1,389 ft. N line, 2,550 ft. E line of Sur., 478.6 miles W from Devine ..... T. D. 400 ft.; drlg. in sandy shale.

Pure Oil Co.'s No. 1 Nick F. Fahn, in Amos Hudson Sur. No. 587, near NW line of Sur. ..... T. D. 1,800 ft.; dropped from reports.

NUECES COUNTY

H. Grimm et al's No. 1 A. R. Roberts, Blk. 79, Winter Vegt. Garden Subd., 6 miles NW of Robstown, 12 miles NE Agua Dulce Field ..... T. D. 3,535 ft.; shut down; waiting on orders; contract depth.

SAN PATRICIO COUNTY

George B. Pickett's No. 1 Baldwin, 9,000 varas due E of Denton, 1,200 ft. S of the SE cor. of O'Neil Sur., Abstract 211 ..... T. D. 2,040 ft.; drlg. in gumbo.

LaFeria Oil & Gas Co.'s No. 1 C. C. Smith, in J. C. White Sur., 690 ft. to N line, 350 ft. to E line ..... T. D. 2,967 ft.; drlg. in sand.

STARR COUNTY

Smith & Adams' No. 1 Welch, Perdernal Sur. ..... T. D. 841 ft.; standing.

UVALDE COUNTY

Waldrop & Welch's No. 1 H. S. Benson, 2 miles NW of Uvalde ..... T. D. 1,020 ft.; drlg. in lime rock; depth corrected.

Waldrop & Welch's No. 1 E. R. Edmonds, 1,750 ft. NW, 7,200 ft. W of Sec. 71, in the A. Gomez Sur., 8 miles S of Uvalde ..... T. D. 750 ft.; shut down in Edwards lime.

Phantom Oil Co.'s No. 1 Claudt, Sec. 611 ..... T. D. 1,725 ft.; drlg. gray lime rock.

VICTORIA COUNTY

Lion Oil & Ref. Co.'s No. 1 J. A. McFadden, 2,577 ft. W. 514 ft. N from NE cor. of C. O. Edwards tract in M. J. Travieso Sur. ..... T. D. 1,215 ft.; drlg. in gumbo and shale.

WILLACY COUNTY

Weimer-Richardson's No. 1 Elmore ..... T. D. 1,860 ft.; shut down in gumbo.

WILLIAMSON COUNTY

Harlem et al's No. 1 H. H. Stiles, in the J. Bevil Sur., 220 ft. N and 330 ft. E of Sur. ..... Rigging up.

Fred Beatty's No. 1 H. Bland, 450 ft. from N line, 1,000 ft. from E line of tract, in the P. Coursey Sur., 1 mile E from Taylor ..... T. D. 1,176 ft.; shut down.

Fred Beatty's No. 1 J. B. Pumphrey, 1,328 ft. from S and E lines of Mrs. J. B. Pumphrey 168-ac. tract in the W. Cartwright Sur. ..... Rigging up.

M. Bartlett et al's No. 1 R. E. Thomas, 450 ft. from N line, 170 ft. from E line of S 50 of 100-ac. of farm in the H. Owen Sur. ..... Spudded in.

E. L. Chapman's No. 2 J. H. McConnell, 1,070 ft. from W line, 150 ft. from N line of tract in the S. Miller Sur. ..... Rigging up.

Elliot et al's No. 1 S. W. Jones, 600 ft. from W line, 400 ft. from S line of Alvert Nantz Sur. ..... Spudded in.

E. L. Chapman's No. 2 Fuchs, 150 ft. SW line, 750 ft. NW line of 93-ac. tract in the S. Miller Sur. ..... T. D. 1,000 ft.; drlg.

G. B. Peterman's No. 2 J. C. Abbott, 450 ft. from S and W line of Abbott 100-ac. tract, in the Simon Miller Sur., SE from Thrall ..... Rigging up.

Bridwell et al's No. 1 H. L. Martin, 1,150 ft. from N line, 150 ft. from W line of Simon Miller Sur. .... Rigging up.

McNeil et al's No. 1 R. L. Abbott, 330 ft. NW line, 150 ft. NE line of Abbott 15-ac. tract, in the S. Miller Sur. ..... Spudded in.

Powell & Kykendall's No. 1 Christian Mager, in the W. Byerly Sur., 150 ft. N and 450 ft. E of farms of 150 acres ..... Old well deepening.

E. L. Chapman's No. 1 Barney Lawrence, 330 ft. from SE and SW lines of farm, in the Simon Miller Sur.. Rigging up.

E. L. Chapman's No. 1 J. F. McConnell, 150 ft. from S and W of 100-ac. farm, in the Simon Miller Sur... T. D. 1,922 ft.; Serpentine; light show oil 1,900 ft.

E. R. Ertell's No. 1 J. F. McConnell, 295 ft. from N line, 180 ft. from W of S 50-ac. of 100-ac. farm, in the Simon Miller Sur. ..... T. D. 2,136 ft.; small oil show 1,100 ft.

Keeshan et al's No. 1 R. L. Abbott, 170 ft. from N line, 712 ft. from W line of farm, in the Simon Miller Sur. ..... Derrick up.

E. W. Marts et al's No. 1 R. L. Abbott ..... Spudded in.

Taylor Temple Oil Co.'s No. 1 F. M. Cain, 876 ft. from E line, 150 ft. from N line of C. D. Johnson 109-ac. tract, in the S. Miller Sur. ..... Rigging up rotary.

J. A. Thompson's No. 1 T. H. Martin, 150 ft. N and E lines of 20-ac. tract, in the S. Miller Sur. ..... Location.

Westheimer & Daube's No. 1 R. L. Abbott, 150 ft. from N and W lines of 57-ac. tract, in the S. Miller Sur.. Location.

R. R. Wilder's No. 1 H. T. Martin, 158 ft. from N and E lines of H. T. Martin 76.25-ac. tract, in the S. Miller Sur. ..... Rigging up rotary.

L. W. Wilson et al's No. 1 W. L. Lawrence, 150 ft. from W line and C N and S of 35-ac. tract or 1,400 ft. from SW line, 1,450 ft. SW line of H. Owens Sur. ... Spudded in.

ZAPATA COUNTY

John Pappas' No. 2 Cuellar, Por. 33 and 34 ..... T. D. 1,890 ft.; abandoned.

B. F. Nixon's No. 1 A. Gutierrez, 170 ft. S line, 332 ft. E line, Lot 5, Blk. 8, Partition 10, Borrego grant .... Rigging up.

National Oil Co.'s No. 1 D. B. Adams ..... T. D. 690 ft.; shut down; lack of water; making considerable gas; blowout from shallow depth while pumping for water; laying water line.

ZAVALA COUNTY

Weigand Bros.' No. 1 W. L. Gates, Hooper & Wade Sur. No. 13, 1,320 ft. S of N line, 1,220 ft. W of NE cor. Sur., about 16 miles S of Batesville ..... T. D. 2,240 ft.; shut down.

Thomas T. Taylor's No. 1 Townsite of Belmonte, 600 ft. SE of city water works ..... Location.

Jack Baldwin's No. 1 J. R. Price, in the W. E. Erskin Sur. No. 34 ..... Spudded in and shut down.

Southern Crude Oil Purch. Co.'s No. 1 Nat M. Washer, in the T. Pinckhardt Sur. No. 180, 1 deg. E, 6,795 ft. from SE cor. ..... T. D. 4,072 ft.; hard lime and shale; running csg.

Ike Pryor's No. 1 Martha Campbell, 400 ft. from N line, 5,400 ft. from E cor. of Sur., Sec. 99, in the Martha Campbell Sur., 3½ miles NE from La Pryor.. T. D. 1,300 ft.; shut down.

F. Baldwin's No. 1 Washer, 300 ft. S and E of Sec. 34, in the W. E. Erskin Sur. ..... Spudded in and shut down.

GULF COAST FIELDS AND WILDCATS

(Continued from Page 57)

Humble & Valley's No. 6 Woodley ..... Derrick.
Humble & Valley's No. 7 Woodley ..... Derrick.
Humble & Valley's No. 8 Woodley ..... Derrick.

DEWALT—FORT BEND COUNTY

Humble Oil & Refg. Co.'s No. 13 Brazos ..... Drlg. sticky shale 3,334 ft.
Humble Oil & Refg. Co.'s No. 10 Sugarland ..... Location.
Humble Oil & Ref. Co.'s No. 10 Nelson ..... Location.

HUMBLE—HARRIS COUNTY

Benedum & Trees No. 1 Foley, south ..... Sticky shale 5,728 ft.; cmtd. 9⅝-in. csg. 5,700 ft.
Continental Oil Co.'s No. 1 Koltar, south ..... Abandoned 5,157 ft.
Dunbar & Deering's No. 1 Hirsh, northwest ..... Comp. flowing 600 bbls. oil 4,136 ft.
Masterson & Sullivan's No. 1 Perkins ..... Abandoned 3,048 ft.
Humble Oil & Ref. Co.'s No. 12 Williams ..... Sand and shale 4,533 ft.; cmtd. 9⅝-in. csg. 4,255 ft.
M. LaRue's No. 1 Cicero ..... Cleaning hole 3,920 ft.
Rio Brave Oil Co.'s No. 1 fee, west ..... Tested salt water 4,212 ft.; to deepen.
Sun Oil Co.'s No. 5 Bender, west ..... Location.
Sun Oil Co.'s No. 6 Bender, west ..... Drlg. gumbo 468 ft.
Sun Oil Co.'s No. 7 Bender, west ..... Location.
Sun Oil Co.'s No. 48 River, north ..... T. D. 1,846 ft.; standing.
The Texas Company's No. 24 House, north ..... Standing 3,968 ft.
The Texas Company's No. 42 Stevenson, south ..... Drlg. sticky shale 4,577 ft.
The Texas Company's No. 22 Wheeler & Pickins, northeast ..... Drlg. sand and boulders 2,685 ft.
The Texas Company's No. 1 Texas Pipe Line Co., west... Drlg. gumbo and boulders 2,692 ft.
The Texas Company's No. 14 Koehler (workover) ..... Abandoned 3,575 ft.
Trapshooter Riley Oil Co.'s No. 1 Ashton, west ..... Location.

BLUE RIDGE—FORT BEND COUNTY

Gulf Production Co.'s No. 18 Luscher, south ..... Derrick.
Navarro Oil Co.'s No. 9-A Robinson, west ..... Drlg. gumbo 1,670 ft.
Sinclair Oil & Gas Co.'s No. 1 Blakely ..... Sand showing oil 5,554-87 ft.

PIERCE JUNCTION—HARRIS COUNTY

Continental Oil Co.s No. 2 Prudential (workover) ..... Fishing 4,322 ft.
Gulf Production Co.'s No. 32 Taylor ..... Drlg. 2,767 ft.
Navarro Oil Co. and Texas Exp. Co.'s No. 10 Dooley (workover) ..... Repairing rig after blowout 3,915 ft.

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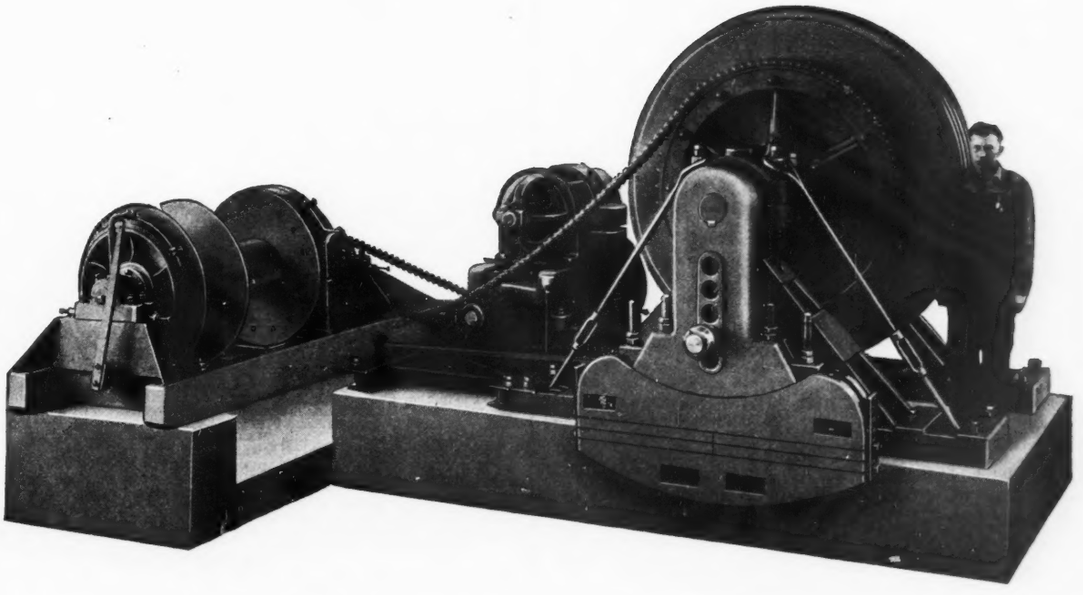
Rig Fronts



A Typical Motor Installation

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HILLMAN-KELLEY, INC., 2441 Hunter St., Los Angeles, Cal.

Rio Brave Oil Co.'s No. 12-A Settegast (workover) ..... Drlg. sandy shale 4,876 ft.
Rio Brave Oil Co.'s No. 18-A Settegast, west ..... Drlg. lime rock 1,508 ft.
Rio Brave Oil Co.'s No. 19-A Settegast ..... Location.

LIBERTY—LIBERTY COUNTY

Empire Gas & Fuel Co.'s No. 12 O'Brien ..... Drlg. rock 3,228 ft.
The Texas Company's No. 7 Green, northwest ..... Building derrick.

HULL—LIBERTY COUNTY

Republic Production Co.'s No. 124 Dolbear (workover) ... Comp. flowing 1,000 bbls. oil 2,419 ft.
The Texas Company's No. 1 Barrow fee ..... Comp. flowing 1,100 bbls. pipe line oil on half-inch choke 3,956 ft.; gravity 34 degrees.
The Texas Company's No. 3 Hannah-Vacuum ..... Drlg. sand and shale showing gas 5,097 ft.

BIG CREEK—FORT BEND COUNTY

Gulf Production Co.'s No. 58 Davis ..... Drlg. gumbo and lime 2,462 ft.
The Texas Company's No. 2 Fee (workover) ..... Set 3 joints screen 3,774-3,842 ft.; T. D. 3,992 ft.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 11 Mayes ..... Recementing csg. after blowout 2,704 ft.

NASH—BRAZORIA COUNTY

Rycade Oil Corp.'s No. 15 Wisdom (workover) ..... Pulling screen to deepen 3,747 ft.

SOUR LAKE—HARDIN COUNTY

Austin & Fenell's No. 1 Watson ..... Shut down 2,394 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 83- ACotton ..... Drlg. sand and shale showing oil 424 ft.

GOOSE CREEK—HARRIS COUNTY

Humble Oil & Ref. Co.'s No. 77 Simms-Smith ..... Drill stem stuck 6,642 ft.
A. F. Bradbury's No. 5 Gillette ..... No report.

SPINDLETOP—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 81 McFaddin (workover) ..... Drlg. 4,100 ft.
Yount Lee Oil Co.'s No. 131 McFaddin ..... Drlg. 2,946 ft.
Yount Lee Oil Co.'s No. 132 McFaddin ..... Drlg. 2,801 ft.
Yount Lee Oil Co.'s No. 133 McFaddin ..... Drlg. 2,412 ft.
Yount Lee Oil Co.'s No. 134 McFaddin ..... Drlg. 2,100 ft.
Yount Lee Oil Co.'s No. 135 McFaddin ..... Drlg. 1,510 ft.
Yount Lee Oil Co.'s No. 32 Gladys City ..... Drlg. 3,604 ft.
Yount Lee Oil Co.'s No. 45 Gladys City (workover) ..... Drlg. 5,100 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Saxet Oil Co.'s No. 3 Hogg ..... Derrick.

NORTH DAYTON—LIBERTY COUNTY

Victor Oil Co.'s (V. H. Borsodi) No. 1 Gulf ..... Set screen to test 4,466 ft.
Victor Oil Co.'s (V. H. Borsodi) No. 2 Gulf ..... Drlg. sand and shale showing oil 4,521 ft.
John A. Deering's No. 6 fee ..... Abandoned 1,148 ft.
Harvey Smith's No. 1 Simmons & Brown ..... Sand and shale showing oil 5,058-97 ft.; bailing.
Harrison Oil Co.'s No. 5 Quintette ..... Location.
Houtex Oil Co.'s No. 1 Wilhite ..... Drlg. gumbo 2,879 ft.
The Texas Company's No. 1 Paraffine fee ..... Cementing 6⅝-in. csg. 4,951 ft.

HIGH ISLAND—GALVESTON COUNTY

Gulf Production Co.'s No. 10 Smith ..... Drlg. gumbo and boulders 1,796 ft.
Marrs McLean's No. 18 Cade ..... Drlg. rock 2,757 ft.

ORCHARD—FORT BEND COUNTY

Gulf Production Co.'s No. 22 Moore ..... Drlg. sticky shale 3,780 ft.
Gulf Production Co.'s No. 21 Moore ..... Drlg. sand and lime 3,500 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Oil Co.'s No. 5 Esperson ..... Drlg. sand and shale 4,561 ft.
Cranfill-Reynolds Oil Co.'s No. 9 Esperson ..... Drlg. sand and shale 4,500 ft.
Cranfill-Reynolds Oil Co.'s No. 11 Esperson ..... Rig.
Cranfill-Reynolds Oil Co.'s No. 12 Esperson ..... Location.
Cranfill-Reynolds Oil Co.'s No. 13 Esperson ..... Location.
Cranfill-Reynolds Oil Co.'s No. 3 Davis ..... Trying to blow out 2,195 ft.
Cranfill-Reynolds Oil Co.'s No. 1 Vajdak (workover) ... Drlg. shale 6,662 ft.
Republic Production Co.'s No. 1 Moores Bluff ..... Rig.
Yount Lee Oil Co.'s No. 3 Moore's Bluff ..... Drlg. shale and lime 4,096 ft.

REFUGIO—REFUGIO COUNTY

Fox & Heflin's No. 2 Fannie Heard ..... Comp. flowing 600 bbls. 3,692-3,703 ft.
Houston Oil Co.'s No. 1 Vance ..... Comp. flowing 600 bbls. 3,680-92 ft.
Houston Oil Co.'s No. 1 Kay ..... Drlg. plug 4,470 ft.
Houston Oil Co.'s No. 9 Fannie Heard (workover) ..... Comp. gas well, 1,350 pounds pressure, 3,656-65 ft.
Houston Oil Co.'s No. 1 City, Block 5 ..... Drlg. gumbo 508 ft.
Houston Oil Co.'s No. 1 City, Block 20 ..... Rig.
Houston Oil Co.'s No. 1 City, Block 59 ..... Location.
Houston Oil Co.'s No. 1 O'Connor ..... Rig.
Houston Oil Co.'s No. 1 West ..... Spudded.
Houston Oil Co.'s No. 1 Rose Lambert ..... Drlg. hard shale and lime 2,845 ft.
Houston Oil Co.'s No. 2 Rose Lambert ..... Rig.
Houston Oil Co.'s No. 1-A Fannie Heard ..... Rig.
Houston Oil Co.'s No. 1 Sitterle ..... Drlg. sticky shale 2,556 ft.
Houston Oil Co.'s No. 13 P. H. Rooke ..... Drlg. sand rock 1,414 ft.
Independent Oil & Gas Co.'s No. 2-C J. F. B. Heard ..... Derrick.
Independent Oil & Gas Co.'s No. 1 Clint Heard ..... Derrick.
Independent Oil & Gas Co.'s No. 1 Mercy Academy ..... T. D. 5,390 ft.; oil sand 5,366-74 ft.
Independent Oil & Gas Co.'s No. 1 Helen Reilly ..... Drlg. sand 5,435 ft.
Independent Oil & Gas Co.'s No. 1 M. F. Lambert ..... Drlg. broken lime 4,934 ft.
Edwin M. Jones' No. 1-A Mitchell ..... Location.
Edwin M. Jones' No. 1 Jeter ..... Rigging up to pump; sand 3,681-96 ft.
Edwin M. Jones' No. 2-A Mitchell ..... Set 10-in. csg. 511 ft.
Edwin M. Jones' No. 2-A J. F. B. Heard ..... Drlg. shale 912 ft.
Larco Co.'s No. 5 Strauch ..... Spudded.
Mission Drlg. Co.'s No. 1 Moss ..... Trying to blow out 6,408-16 ft.
Mission Drilling Co.'s No. 1 Eliza Brown ..... Drlg. gumbo 2,970 ft.
Morgan Oil Corp.'s No. 1 St. Johns ..... Drlg. sandy lime 4,054 ft.
Moody-Seagraves Prod. Co.'s No. 2 O'Brien ..... Drlg. sand and shale 3,163 ft.
Morgan Oil Corp.'s No. 1 O'Connor ..... Drlg. sticky shale 780 ft.
Morgan Oil Corp.'s No. 2 O'Connor ..... Rig.
Morgan Oil Corp.'s No. 3 O'Connor ..... Drlg. sandy shale 822 ft.
Morgan Oil Corp.'s No. 4 O'Connor ..... Rig.
Pearson Properties, Inc.'s No. 2 Ryals ..... Derrick.
Rutherford-Traylor Oil Co.'s No. 1 Cable ..... Comp. flowing 700 bbls. pipe line oil 3,683-98 ft.
Rutherford-Traylor Oil Co.'s No. 2 Cable ..... Rig.
Saxet Oil Co.'s No. 2 Ryals ..... Comp. flowing 4,000 bbls. fluid, 1,000 bbls. net oil, on half-inch choke, sand 5,457-67 ft.
Saxet Oil Co.'s No. 3 Cable ..... Set 10-in. csg. 422 ft.
Sun Oil Co.'s No. 3 Buckley, Lot 5, Blk. 2 ..... Junked and abandoned; T. D. 3,693 ft.
Sun Oil Co.'s No. 4 Buckley ..... Drlg. sand 3,672 ft.
Union Producing Co.'s No. 2 Lambert ..... Fishing swab 5,891 ft.
Union Producing Co.'s No. 3 Lambert ..... Drlg. hard sand 4,133 ft.
Union Producing Co.'s No. 4 Morgan-Vance ..... Derrick.
Union Producing Co.'s No. 4 Morgan-Shelly ..... Drlg. 319 ft.
Union Producing Co.'s No. 3 O'Brien ..... Swabbing 5,422 ft.
Union Producing Co.'s No. 4 O'Brien ..... Cemented csg. to test 5,418 ft.
Union Producing Co.'s No. 3 Powers ..... Drlg. hard sandy lime 5,110 ft.
Union Producing Co.'s No. 4 Powers ..... Drlg. lime rock 2,639 ft.
Union Producing Co.'s No. 2 Shelton ..... Drlg. sticky shale 4,261 ft.
Union Producin Co.'s No. 3 Mitchell ..... Drlg. shale and lime 4,867 ft.
Union Producing Co.'s No. 4 Mitchell ..... Drlg. hard shale and lime 333 ft.
Union Producing Co.'s No. 9 Fannie Heard ..... Drlg. oil sand 3,655 ft.

SOUTH LOUISIANA FIELDS

LOCKPORT—CALCASIEU PARISH

Vacuum Oil Co. and Gulf Ref. Co.'s No. 26 Miller ..... Drlg. gumbo 3,104 ft.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 27 Miller ..... Drlg. sand showing oil 3,737 ft.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 28 Miller ..... Derrick.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 29 Miller ..... Moving in material.
Vacuum Oil Co. and Gulf Ref. Co.'s No. 5 Freiberg & Wolf ..... Drlg. gumbo 2,823 ft.
Vacuum Oil Co. & Gulf Producing Co.'s No. 7 Farquahar.. Derrick.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 5 Caldwell ..... No report.
Calcasieu Oil Co.'s No. 18 Watkins ..... No report.
Duhon Oil & Mineral Co.'s No. 1 Duhon ..... Derrick.
Rycade Oil Corp. and Humble's No. 1 Gulf Land (workover) ..... Pulling tubing; total depth 5,687 ft.
Rycade Oil Corp. and Humble's No. 5 Gulf Land ..... Location.
Sun Oil Co.'s No. 1 J. H. Duhon ..... Drlg. 3,301 ft.
The Texas Company's No. 7 State ..... Driving piling.
Yount Lee Oil Co.'s No. 10 School ..... Drlg. 4,000 ft.

JENNINGS—ACADIA PARISH

The Texas Company's No. 5 Rayne heirs, King tract .... Reported in salt 8,014 ft.
Yount Lee Oil Co.'s No. 8 Houssiere-Latrielle, Section 47-9s-2w ..... T. D. 7,300 ft.; cmtd. 7-in. csg.

VINTON—CALCASIEU PARISH

Gulf Refining Co.'s No. 50 Star-Vincent ..... Drlg. 3,012 ft.

BAYOU BOUILLON—ST. MARTIN PARISH

Rycade Oil Corp.'s No. 1 Woodyard Lake ..... Rig.
Rycade Oil Corp.'s No. 10 Bouillon Fee ..... Location.

STARKS—CALCASIEU PARISH

Adams Oil Co.'s No. 1 Roderick ..... No report.
J. O. Davis' No. 1 Industrial ..... Standing 3,775 ft.
Gulf Refining Co.'s No. 22 Lutcher-Moore ..... Drlg. 104 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 9 Yount Lee ..... Drlg. gumbo and lime 5,048 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Black Oil Co.'s No. 1 Lancashire, near Sealey ..... Drlg. shale 3,212 ft.
Empire Gas & Fuel Co.'s No. 1 Boyd, San Felipe ..... Cap rock 4,000 ft.
O'Hara et al's No. 1 Batla, near Raccoon City ..... Fishing 4,000 ft.

BRAZORIA COUNTY

The Texas Company's No. 1 Ewin, Harvey Little Sur. ... Drlg. hard sand 4,621 ft.
Mills Bennett Production Co.'s No. 1 Random, Allen .... Sand and shale 4,928 ft.; cmtd. 9⅝-in. csg. 4,877 ft.
Faust et al's No. 5 Faust ..... Sandy shale 4,083 ft.; cem. 6⅝-in. casing.
Rucks & Patterson's No. 1 Hunter, southwest of Hoskins.. Shut down 1,185 ft.
Rycade Oil Corp.'s No. 1 Rapid City, Henry Austin Sur... Drlg. gumbo 4,434 ft.
Shell Petroleum Corp.'s No. 1 Blakely-Winston, Danbury ..... Salt 5,228-55 ft.; plugged to oil sand 1,572 ft.
Steel & Strickland's No. 1 Lockridge ..... Rig.
United Oil Syndicate's No. 1 Moores, Francis Moore Sur.. Drlg. 402 ft.

CHAMBERS COUNTY

Chicago Oil Corp.'s No. 1 Lawrence ..... Shut down 3,415 ft.
Shell Petroleum Corp.'s No. 1 Herff, Moss Bluff ..... Drlg. hard sandy lime 4,178 ft.
Pure Oil Co.'s No. 1 Kirby, Charles Tilton Survey ..... Drlg. sticky shale and lime 2,556 ft.
Rycade Oil Corp. and Pure Oil Co.'s No. 1 Jackson, Oyster Bayou ..... Rig.
Superior Oil Corp.'s No. 1 Jackson ..... Drlg. gumbo 3,710 ft.

FORT BEND COUNTY

Gulf Production Co.'s No. 2 Sugarland, Clodine ..... Drlg. gumbo 3,100 ft.
Pure Oil Co.'s No. 1 Jackson Brown, Barrett and Harris Survey ..... Abandoned 4,510 ft.; no showings.

GRIMES COUNTY

John Deering's No. 1 Rossi, B.B.B.&C. Sur. ..... Drlg. gumbo and lime 1,708 ft.

HARDIN COUNTY

D. O. Speights' No. 1 Fee, near Batson ..... Drlg. gumbo 912 ft.

HARRIS COUNTY

Baldwin and associates' No. 1 Kitzman, Cypress ..... Shut down 4,247 ft.
Cranfill-Reynolds Oil Co.'s No. 1 Rorick, J. Ogburn Sur.. Drlg. sand and shale 2,042 ft.
Humble Oil & Ref. Co.'s No. 7 Warren, Hockley ..... Drlg. shale 5,539 ft.
Humble Oil & Ref. Co.'s No. 1 Siadous, Mykawa ..... Drlg. shale 5,100 ft.
Humble Oil & Ref. Co.'s No. 2 Minnetex ..... Standing 1,216 ft.
Sloan Prospecting Co.'s No. 1 Ulrich, Hannah Nash Sur... Abandoned 6,221 ft.
Sloan Prospecting Co.'s No. 1 Davis, Cedar Bayou ..... Location.
Strang Oil Co.'s No. 1 Good, Deer Park ..... Drlg. gumbo and boulders 2,890 ft.
Martin, Drake & Jones' No. 1 Haney ..... Drlg. shale and lime 5,100 ft.

JACKSON COUNTY

The Texas Company's No. 1 C. A. Mitchell, G. Ewing Sur. ..... Drlg. sand and boulders 1,683 ft.

JEFFERSON COUNTY

Gulf Production Co.'s No. 5 Burrell, Fannett ..... Drlg. shale 5,246 ft.
The Texas Company's No. 1 Fitzhugh, Big Hill ..... Abandoned 5,863 ft.
Westbury Oil Co.'s No. 1 West, Choate Sur. ..... Shut down 3,100 ft.

LIBERTY COUNTY

Gulf Production Co.'s No. 4 Boyt, Hankamer ..... Sand and shale showing oil 3,552 ft.
Gulf Production Co.'s No. 6 Boyt, Hankamer ..... Spudded.
Gulf Production Co.'s No. 1 A. E. Lee, Hankamer ..... Drlg. gumbo 1,304 ft.
Gulf Production Co.'s No. 1 McFadden, Moss Bluff ..... Drlg. sand and lime 3,848 ft.
Humble Oil & Ref. Co.'s No. 1 Sabine Tram, Devers ..... Drlg. gumbo 1,681 ft.
Tucker et al's No. 1 Bell ..... Rigging up.

MATAGORDA COUNTY

Cockburn et al's No. 1 Hawkins, Shepherds, Mott ..... Drlg. sand and shale 5,429 ft.

MONTGOMERY COUNTY

Kelley-Kaker's No. 2 Guerges ..... Shut down 1,915 ft.

ORANGE COUNTY

Gulf Production Co.'s No. 1 W. H. Starks, Port Neches .. Drlg. 1,210 ft.
The Texas Company's No. 2 Kuhn, Port Neches ..... Drlg. sand and shale 2,885 ft.
The Texas Company's No. 2 Stark, Port Neches ..... Drlg. sticky shale and lime 3,472 ft.

WALLER COUNTY

Kirby Petroleum Co.'s No. 2 Davis, San Felipe ..... Standing 3,000 ft.
W. P. Morris' No. 1 Chapman, Donoho Sur. ..... Shut down 2,075 ft.

WASHINGTON COUNTY

W. D. Anderson's No. 1 Mueller ..... Abandoned 2,666 ft.
W. Birdwell's No. 1 Schram, James Walker Sur. ..... Shut down 2,110 ft.
Clifton et al's No. 1 Pruiss, E. Alcorn Sur. ..... Rig.
Mid-Kansas Oil & Gas Co.'s No. 1 Johnke, A. Miller Sur. ..... Spudded.
Sun Oil Co.'s No. 9 Grote, Clay Creek ..... Drlg. oil sand 946 ft.
Sun Oil Co.'s No. 2 Janner, Clay Creek ..... Oil sand 1,238 ft.
Sun Oil Co.'s No. 5 Hunt, Clay Creek ..... Location.

SOUTH LOUISIANA

ACADIA PARISH

Calcasieu Oil Co.'s No. 1 Hays, Sec. 10-8s-1w ..... No report.
Charles P. Siess' No. 1 Lyons, Sec. 4-10s-1e ..... Location.

CALCASIEU PARISH

Wilfred Lahay's No. 2 James ..... Standing 3,775 ft.

CAMERON PARISH

Shell Petroleum Corp.'s No. 12 Watkins, Black Bayou ... Pulling screen to workover 5,239 ft.
Shell Petroleum Corp.'s No. 15 Watkins, Black Bayou ... Location.
Vacuum Oil Co.'s No. 1 Cameron Meadows, Sec. 21-14s-13w ..... Fishing 3,800 ft.

IBERIA PARISH

The Texas Company's No. 5 Vermillion Bay ..... Building derrick.

IBERVILLE PARISH

Shell Petroleum Corp.'s No. 4 Wilbert, White Castle ..... Cmtd. 9⅝-in. csg. 5,175 ft.
Standard Oil Co.'s No. 4 Schwing, Bayou Blue ..... Tested salt water 2,088 ft.; pulling screen.
Standard Oil Co.'s No. 5 Schwing, Bayou Blue ..... Building derrick.
Standard Oil Co.'s No. 5 Wilbert, Bayou Blue ..... Location.
Standard Oil Co.'s No. 6 Wilbert, Bayou Blue ..... Salt 3,026 ft.; to test sand at 1,975 ft.
Standard Oil Co.'s No. 1 Case, Bayou Des Glaise ..... Drill stem stuck 3,168 ft.
Standard Oil Co.'s No. 2 Case, Bayou Des Glaise ..... Location.

JEFFERSON DAVIS PARISH

Pure Oil Co.'s No. 1 Day, Sec. 1-10s-5w ..... Abandoned 5,216 ft.
Shell Petroleum Corp.'s No. 1 Heyd, Iowa ..... Rigging up.
Yount Lee Oil Co.'s No. 1 Courtney, Welsh ..... Drlg. 2,000 ft.
Yount Lee Oil Co.'s No. 1 Abbott, Welsh ..... Drlg. 2,200 ft.

LA FOURCHE PARISH

The Texas Company's No. 1 Leesville ..... Drlg. sand and gravel 1,384 ft.

PLAQUEMINE PARISH

Humble Oil & Ref. Co.'s No. 1 Lake Washington, Lake Grand Ecaille ..... No report; previous report drlg. hard lime 4,945 ft.
The Texas Company's No. 4 State, Garden Island Bay ... Drlg. 1,000 ft.

ST. LANDRY PARISH

Elbof Exploration Co.'s No. 1 Ledoux, Eunice ..... Abandoned 4,350 ft.
Herbert-Baker Oil Co.'s No. 1 Fisher, Sec. 10-3S-4e ..... No report.
Gulf Refining Co.'s No. 2-A Hoskins, Port Barre ..... Tested salt water 3,600 ft.; drlg. deeper.
Gulf Refining Co.'s No. 2 Lahaye, Port Barre ..... Rig.
Alex Rice's No. 1 Futral, Port Barre ..... Rig.
The Texas Company's No. 7 Botney Bay, Port Barre ... Drlg. 2,836 ft.
The Texas Company's No. 8 Botney Bay, Port Barre ... Location.

ST. MARY PARISH

Pure Oil Co.'s No. 2 Wax Lake, Sec. 12-17s-9e ..... Loosened drill stem 2,079 ft.; resuming drilling.

TERREBONNE PARISH

Charles Paggi's No. 2 Evergreen, Sec. 145-15s-16e ..... No report.
The Texas Company's No. 4 State-Bay St. Elaine ..... Drlg. sandy shale 4,747 ft.
The Texas Company's No. 1 La. L. & E. Co., Bay Junope.. Core sand at 1,580 ft.
The Texas Company's No. 2 State, Lake Pelto ..... Drlg. sand and boulders 2,699 ft.
The Texas Company's No. 3 State, Caillou Island ..... Rig.
The Texas Company's No. 4 State, Lake Barre ..... Building derrick.
The Texas Company's No. 2-A State, Dog Lake ..... Drlg. gumbo 2,360 ft.

SOUTHWEST TEXAS

(Continued from Page 54)

gone as high as $40 and $50 base. Leasing is general throughout DeWitt with many brokers as well as company men on the ground and a great portion of the county it appears will soon be under lease.

COMPLETED WELLS

Following are the completions and their initial production in the various pools in the district in the week in review:

Jennings Pool—Zapata County

A. L. Edgington's No. 3 Trevino, 790 feet east line, 150 feet south line, Block 26, Survey 412; total depth 1,233 feet; estimated 100 bbls.

Dobrowolski Pool—Bexar County

Penn-Tex Oil Co.'s No. 1 Dobrowolski, 450 feet from south line, 150 feet from east line, west 67 acres of 147-acre tract, M. Menchaca Survey, 5 miles southeast of San Antonio; total depth 660 feet; 5,000,000-foot gas well.

Bruner Pool—Caldwell County

Humble Oil & Refining Co.'s No. 5 T. Briscoe, 1,050 feet from west, 150 feet from north line of 56-acre tract, in the J. Hinds Survey; total depth 2,756 feet; pumped 175 bbls.

Pettus Area—Bee County

Union Producing Co.'s No. 8 George Ray, 350 feet due west of Humble's No. 2 McKinney, in the Kerr Survey; total depth 3,869 feet; sand 3,864-69 feet; set screen; 500 bbls.

Darst Creek—Guadalupe County

Humble Oil & Refining Co.'s No. 6 Sallie Wilson, 150 feet from south line, 172 feet from west line of tract, in the J. C. Darst Survey; total depth 2,644 feet; 300 bbls. on the pump.

Magnolia Petroleum Co.'s No. 2 Appling, offset to No. 1 Appling on southwest, east end of field, in the James Hodges Survey; total depth 2,475 feet; pumped 600 bbls.

The Texas Company's No. 7 Dallas Wilson, 150 feet from the south and east lines of 40-acre tract, in the J. C. Darst Survey; total depth 2,632 feet; completed; swabbed 960 bbls.

ABANDONED TESTS

Cole Pool—Duval County

Wilkins Seacord's No. 1 S. Benavides, 660 feet northwest line, 150 feet northeast line, Block 8, Survey 174; location abandoned.

Jennings Pool—Zapata County

May & Holder and Alamo Drilling & Leasing Co.'s No. 2 Cuellar, 450 feet northeast line, 150 feet northwest line of May & Holder 80-acre Cuellar tract in the Cerrito Blanco grant; location abandoned.

O. W. Killam's No. 21 Cuellar, 450 feet northeast line, 4,586 feet northwest line, in the Cerrito Blanco grant; total depth 2,145 feet; abandoned.

Darst Creek—Guadalupe County

Humble Oil & Refining Co.'s No. 4 Sallie Wilson, 500 feet east of No. 2, 150 feet from north line of tract, in the J. C. Darst Survey; temporarily abandoned.

Trigg and others' No. 1 Fred Warren, approximately 3,000 feet southwest of Magnolia's No. 1 Nixon, northeast corner of the John H. Burnham Survey, 1½ miles southeast of Darst Creek; total depth 2,950 feet; dry and abandoned.

NEW LOCATIONS

Dobrowolski Pool—Bexar County

Penn-Tex Oil Co.'s No. 1 Sandimeyer, in the A. Menchaca Survey, 8 miles southeast of San Antonio; building derrick.

Buchanan Pool—Caldwell County

Ed Lange and others' No. 1 Geoffrey, 745 feet south and north line, 150 feet east and west line of lease or 1,776 feet east and west line, 3,496 feet south and north line of C. M. Cannon Survey; total depth 1,100 feet; drilling.

Darst Creek—Guadalupe County

Magnolia Petroleum Co.'s No. 1 A. J. Manford, 1,257 feet from southwest corner, 150 feet from southeast line of 210-acre tract, in the southeast corner of the Ed. Pettus Survey, 1 mile north of Penn Oil Co.'s No. 1 Manford; total depth 1,400 feet; drilling in sandy shale.

The Sun Oil Co.'s No. 8 Knoblock, 150 feet from north and west lines of tract, in the J. W. Robinson Survey; location.

The Texas Company's No. 8 Dallas-Wilson, 150 feet from west line, 450 feet from south line of tract, in the J. C. Darst Survey; location.

Kohler Pool—Duval County

Humble Oil & Refining Co.'s No. 45 Kohler, 1,155 feet east line, 330 feet north line, Survey 144; rigging up.

Jennings Pool—Zapata County

Trinity Drillers, Inc.'s No. 1 Trevino, 450 feet west line, 150 feet north line, Block 8, Survey 66; location.

Trinity Drillers, Inc.'s No. 1 F. Cuellar, 150 feet northwest line, 150 feet east line, Block 12, Survey 65; location.

Killam-Duggan's No. 16-C Cuellar, 150 feet north line, 150 feet southwest line, Survey 278; total depth 500 feet; drilling.

O. W. Killam's No. 23 Cuellar, derrick, location to be announced next week.

O. W. Killam's No. 22 Cuellar, 3,535 feet northwest line, 150 feet northeast line, Cerrito Blanco grant; total depth 350 feet; drilling.

Pettus Area—Bee County

Houston Oil Co.'s No. 1 J. R. Beasley, center of Block 36, Pettus Townsite; moving in rig.

Humble Oil & Refining Co.'s No. 3 J. J. McKinney, 150 feet from west line, 1,200 feet south of No. 1, in the L. C. Randolph Survey; location.

Union Producing Co.'s No. 9 George Ray, 150 feet from east line of survey, 1,450 feet south of north corner of the L. C. Randolph Survey, in the G. A. Kerr Survey; location.

DRILLING ACTIVITY

Bruner Pool—Caldwell County

Humble Oil & Refining Co.'s No. 3 New, 150 feet from north line, 1,838 feet from west line of tract, in the James Hinds Survey; total depth 2,390 feet; drilling in chalk.

Buchanan Pool—Caldwell County

Buchanan-Danciger's No. 2-A W. T. Cude, 150 feet from northeast corner of 21-acre lease, or 150 feet north and south line, 122 feet west and east line of survey, in the William Spillers Survey; total depth 1,150 feet; drilling.

Lasater Pool—Brooks County

Houston Oil Co.'s No. 1 Holbein-Wormser, 330 feet north line, 6,540 feet east line, direct offset 600 feet south of No. 1 Lasater, in the Palo Blanco de Maguellas Survey; total depth 6,003 feet; showed 800 pounds pressure on drill stem test, dry gas.

Cartwright Pool—Live Oak County

Houston Oil Co.'s No. 1 R. Boothe, 300 feet from west line, 300 feet south line, in the M. B. Kilvin Survey; total depth 2,324 feet; drilling in sticky shale.

Agua Dulce Pool—Nueces County

Houston Oil Co. of Texas' No. 1 M. E. Brooks, 330 feet from north and east lines of fractional Section 29, Benton Pasture Subdivision, in the Los Sauces grant; total depth 1,960 feet; running 10-inch casing.

Nursery Pool—Victoria County

Humble Oil & Refining Co.'s No. 3-A Jay J. Welder, 1,634 feet southeast line, 736 feet southwest line, in the D.L.&C. Survey, 1½ miles northeast of Nursery.

Darst Creek—Guadalupe County

Abercrombie Drilling Co.'s No. 2 Dix-McKean, 150 feet from north line, 150 feet from west line of 20-acre tract, in the J. R. Robinson Survey; total depth 2,521 feet; drilling in Georgetown.

Empire Gas & Fuel Co.'s No. 5 Dowdy, 792 feet from north line, 150 feet from east line of tract, in the J. C. Darst Survey; derrick.

Empire Gas & Fuel Co.'s No. 2 Knoblock, 600 feet south line, 150 feet east line of 40-acre tract, in the J. R. Robinson Survey; total depth 2,590 feet; drilling in limey marl.

Gulf Production Co.'s No. 2-A Dix-McKean, 150 feet from southeast and southwest lines of 20-acre tract, in the J. R. Robinson Survey; total depth 2,517 feet; setting casing.

Humble Oil & Refining Co.'s No. 5 Yates Wilson, 450 feet from south line, 172 feet from east line of tract, in the J. C. Darst Survey; total depth 2,380 feet; drilling in chalk.

Louisiana Oil Refining Co.'s No. 5 Thomas Dix, 500 feet from south line, 150 feet from east line of 50-acre tract, in the J. R. Robinson Survey; total depth 2,496 feet; set casing.

Magnolia Petroleum Co.'s No. 3-A M. E. Roamel, 450 feet north and south line, 150 feet west and east line of tract, in the J. R. Robinson Survey; total depth 2,862 feet; bailed sulphur water; shut down.

Sun Oil Co.'s No. 7 Knoblock, 1,366 feet from southwest line, 150 feet from northwest line of tract, in the J. W. Robinson Survey; derrick.

Sun Oil Co.'s No. 2 Manford, 150 feet from southwest line of tract, 300 feet southeast of No. 1 well, approximately 600 feet east of Penn Oil Co.'s Manford producer, in the J. Hodges Survey; total depth 2,534 feet; waiting for cement; set casing at 2,265 feet.

Cole Pool—Duval County

F. S. Bain-Miller I. Shaw's No. 1 S. Benavides, 1,950 feet west line, 180 feet north line, Survey 173; total depth 1,240 feet; drilling.

Cole Petroleum Co.'s No. 68 Rosa Benavides, 660 feet northeast line, 660 feet northwest line, Cole Subdivision, Mariano Arispe grant, Block 11, Survey 14; total depth 3,669 feet; drilling.

Kohler Pool—Duval County

Humble Oil & Refining Co.'s No. 45 Kohler, 1,155 feet east line, 330 feet north line, Survey 144; rigging up.

Simms Oil Co.'s No. 9 Dinn, 660 feet east line, 660 feet south line of NW SE of Survey 143; rigged up; standing.

Humble Oil & Refining Co.'s No. 41 Kohler, 2,970 feet south line, 330 feet east line, Survey 165; location.

Schoolfield-O'Byrne—Duval County

Magnolia Petroleum Co.'s No. 1 Hahl Strip, 3,890 feet east line, 660 feet south line, Survey 61; total depth 2,341 feet; sand 2,298-2,341 feet; set 6⅝-inch casing at 2,298 feet; 500 feet of oil in hole.

Roma Pool—Starr County

The Texas Company's No. 1-B V. C. de Guerra, 150 feet south line, 150 feet west line of north 1,173 acres, Jurisdiction of Mier; total depth 3,540 feet; drilling.

Aviator Pool—Webb County

O. W. Killam's No. 1-V A. M. Bruni, 178 feet east line, 1,180 feet north line, Block 22, Brown Subdivision, Albercas grant; total depth 2,650 feet; drilling.

Carolina-Texas Pool—Webb County

E. D. Claggett and Sam Evans' No. 1 Webster, 150 feet south line, 990 feet west line, Survey 684; total depth 24 feet; standing.

W. R. Shankle's No. 2 Webster, 1,170 feet west line, 150 feet south line, Survey 684; rigging up.

Cole Pool—Webb County

South Texas Production Co.'s No. 1 S. Benavides, 200 feet northwest line, 150 feet southwest line, Myrtle E. Hale Subdivision, Block 18, Mariano Arispe grant; derrick.

French Oil Corp.'s No. 1 Rosa Benavides, 150 feet north line, 150 feet west line, Survey 659; total depth 1,270 feet; drilling.

Morris Drilling Co.'s No. 2 S. Benavides, 289 feet northwest line, 150 feet northeast line, Myrtle E. Hale Subdivision, Block 431, Mariano Arispe grant; total depth 1,784 feet; preparing to drill deeper from 1,784 feet.

O. W. Killam's No. 18 Bruni, total depth 3,688 feet, drilling.

E. H. Buckner's No. 1-A Rosa Benavides, 660 feet northwest line, 660 feet northeast line, Cole Petroleum Subdivision, Mariano Arispe grant, Block 5, Survey 14; total depth 1,910 feet; drilling.

Magnolia Petroleum Co.'s No. 2 King-Harper, 660 feet north and east lines, Block 2, Survey 323; location.

Charco Redondo—Zapata County

Mid-West Public Utilities Co.'s No. 1 Garcia, 450 feet southwest line, 450 feet southeast line of M. P. de Garza tract, Block 33, Pedernal grant; total depth 860 feet; drilling.

W. R. Duke's No. 2 J. M. Martinez, 415 feet southwest line, 500 feet northwest line, Duke Subdivision, Block 22, Charco Redondo grant; total depth 973 feet; testing.

C. R. Moore and J. M. Moore's No. 1 Adela G. de Flores, 330 feet northwest line, 330 feet north line, E. M. Doty Oil & Gas Subdivision, Block 99, Charco Redondo grant; location.

Jennings Pool—Zapata County

John J. O'Hern's No. 1 Garcia, 150 feet southeast line, 150 feet northeast line, Comitas grant; rigging up.

W. R. Shankle's No. 1 Cuellar, 61 feet northwest line, 200 feet southwest line, Block 15, Survey 65; rigging up.

O. W. Killam's No. 17 Cuellar, 4,423 feet northwest line, 1,942 feet northeast line, Cerrito Blanco grant; total depth 1,481 feet; sand 1,478-81 feet; testing; set 6⅝-inch casing at 1,478 feet.

H. Muckelroy's No. 3 Trevino, 460 feet south line, 300 feet east line, Block 25, Survey 412; rigging up to drill deeper from 1,281 feet.

Magnolia Petroleum Co.'s No. 3 Cuellar, 150 feet to northeast and southeast lines, Survey 245; total depth 3,550 feet; drilling in broken lime.

South Texas Production Co.'s No. 9 Measles and others, 3,830 feet southeast line, 660 feet northeast line, Cerrito Blanco grant; total depth 1,756 feet; drilling.

Livingston & Twiss' No. 1 Trevino, 150 feet north line, 150 feet west line, Block 7, Survey 66; total depth 1,250 feet; drilling.

F. M. Blair and F. M. Blair, Jr.'s No. 3 Trevino, 500 feet east line, 150 feet north line, Block 1, Survey 66; location.

R. F. Blankenship's No. 2 Garza, 425 feet west line, 425 feet north line, Block 2, Survey 413; total depth 1,710 feet; drilling.

G. F. Owen's No. 2 Montemayor, 820 feet east line, 150 feet north line, Block 7, Survey 64; total depth 700 feet; drilling.

SINCLAIR SETTLEMENT

WASHINGTON, D. C., May 10.—A settlement of the case of the United States against the Sinclair Purchasing Co., pending in the United States District Court for the district of Delaware for the sum of $2,906,487 is recommended to the House of Representatives in a joint resolution reported by the committee on claims. The sum named is now deposited by the defendant oil company in escrow pending approvement of such settlement by Congress.

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20,000 feet 8" O.D. 15.5-pound Pl. end Casing.
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Complete with Dayton couplings and in first class condition.
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50 MILES 4" O.D. PLAIN END PIPE
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All sizes in casing and line pipe from 2" to 15¼" inclusive.
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FOR SALE—8 Sweetland Filter Presses, No. 12, No. 10, No. 9, No. 7, No. 2; 1—300 H. P. Scotch Marine Boiler; Miscellaneous—Compressors, Storage Tanks, Pumps. CONSOLIDATED PRODUCTS COMPANY, 17-20 PARK ROW, NEW YORK CITY. BARCLAY 0600.

FOR SALE—Sweetland Filters, Nos. 2, 6, 9, 10; Kinney steam jacketed Rotary Pumps, 2", 3", 4"; Wax Filter Presses; Tanks; Compressors, etc. Stein Brill Corporation, 26 Cortlandt Street, New York, N. Y.

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FOR SALE: 2—5½ Rebuilt Joplin Special 1,500 ft. Wire Line Machines. Keystone Driller Co., Joplin, Mo. Phones 520-521.

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USED CASING: All sizes and weights. Special prices on 6⅝—17 lbs. Good as new. D. Hansen, 504 Philtower Bldg., Tulsa, Okla.

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310'—15½" 70 lb. Casing. 1,100'—12½" 50 lb. Casing. 1,740'—10" 40 lb. Casing. Located McPherson, Kansas. New Pipe run once in dry hole. First class. Priced very reasonable. Other Pipe and Supplies at Augusta Yards. Write—Wire—Phone. Cohen Pipe & Metal Co., Augusta, Kansas.

PUMPING STATION EQUIPMENT
2—20x33 Worthington Snow Oil Engines, directly connected with 2—5x18 Worthington Deane Pumps.
All auxiliary equipment, including air receivers, overhead cranes, etc. All steel sectional building.
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EQUIPMENT WANTED

WANTED TO BUY: No. 2 National Drilling Machine in good condition for cash. Write Box E-167, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—One 1,500-pound Niles Bement & Bond Steam Hammer as good as new. This hammer only used a short time. For more information write or wire Earl E. Ziegler, Drawer "G," Borger, Texas.

WANTED: SUPER H OR D Fort Worth Spudder in first class condition. Must be bargain. Write Box E-186, The Oil and Gas Journal, Tulsa, Okla.

WANTING TO LEASE, with option to buy, a first class cable drilling rig complete with tools capable of drilling 2,500 to 3,000 ft. Address, L. G. Ellebrecht, Salem, South Dakota.

BUSINESS OPPORTUNITIES

WEST TEXAS MINERAL LANDS $2.50 per acre. Ten year nontaxable leases $1.25; 1/64 undivided royalties 25 cents acre. Joe Cunningham, Big Spring, Texas.

MINERAL RIGHTS FOR SALE
170,000 acres northern New Mexico. Some coal. Structure favorable for oil. K. A. Heron, Chama, N. Mex.

OIL AND GAS POSITIVELY LOCATED—Producing area definitely defined. Approximate depth and quantity determined. Terms, cash, or interest in production. Address Box E-173, The Oil and Gas Journal, Tulsa, Okla.

OIL LOCATED before drilling. Geophysical method. Toggodometer Instrument; take pay in oil. No oil, no pay, except traveling and testing expenses. 95 per cent accuracy. O. P. Coffin, Caddo, Tex.

FOR SALE—Eighty acres land with two producing wells on it. L. Wiley, Greybull, Wyo.

OIL COMPANIES reorganized, refinanced, special facilities for arranging distribution contracts with reputable and recognized brokers. Listing arranged on various exchanges. Have customer for acreage in semiproven area. Also for new company with approved leases. Production and directory of experienced reliable men.
INDUSTRIAL RESEARCH BUREAU
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SPLENDID COMBINATION OF ROYALTIES of producing and nonproducing oil properties conveyed by direct deeds and assignments. Production from very large wells of Oklahoma field indicate certain return of principal, including big profits. With spread on nonproducing properties offering additional speculative possibilities. Open to small or large purchasers. Request particulars. Investigate and decide before opportunity is passed, as such involves no obligation, but provides material for intelligent decision. Wire or write Pioneers Co., 520-521 Cotton-Grain Exchange Building, Oklahoma City, Okla. Telephone 3-3950; Long Distance, LD-180.

ATTENTION, DRILLER—Will give oil and gas lease and seven-eighths royalty for immediate driling NE, Section 26, Township 20, Range 6e I.M., Pawnee County, Oklahoma, owner to retain one-eighth royalty. Address E. J. Diamond, Morrison, Iowa.

BUYERS: Good royalty for sale. Price right from owner. Write Box 701, Odessa, Tex.

WE ARE IN THE MARKET for wet gas for our Gasoline Extraction Plant. Any locality. 15 million feet daily capacity. Advise location and sulphur content of gas. Will operate on Royalty basis.
BELL GASOLINE CORPORATION
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COMPLETE SOUTHWESTERN TYPE 75 Absorption Plant with all auxiliary equipment, located Borger district, immediately available on excellent terms to responsible parties. Write, Box E-191, The Oil and Gas Journal, Tulsa, Okla.

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WILL COMMENCE DRILLING 80 acres in Shackelford soon. Best shallow oil county in Texas. Many known sands 85 to 3,500 feet. Have complete equipment. Want partners $100 and up. Possibilities unlimited; not a promotion but legitimate development by experienced and reliable developer. $5,500 combination, $2,500 only available. Several offsets, 40 acres at $10. Write or wire, E. L. Stratton, Albany, Texas.

GRAVITY BULK STATIONS

Land on Frisco Tracks. Will sell or lease and build to suit. Maps and Prices on request.
SWENSON CONSTRUCTION CO.
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$8.00 BUYS PART OIL 10 acres Oklahoma County. Big opportunity. Joe Milam, Oil Dept., Oklahoma City, Okla.

OIL holds alluring possibilities but SAFEGUARD your future by an investment in World's Most Profitable Natural Industry—SHEEP. Own your own. We care for them without expense to you and guarantee thirty per cent annual returns on your money. 25c brings you full information.
Bow Island Sheep Co.,
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ARE YOU THE MAN? Because there are too many "royalty-stock-selling-propositions," it is logical that "direct-royalty-interests" should find many buyers. If YOU have perpetual-settled-diversified-royalties and potential-royalty-interests, and know—WHAT NOT TO BUY—are financially capable and will open an office, or a branch in New York, deciding to ALWAYS give the public a SQUARE DEAL, then you should make more money, than by any stock selling scheme. I am not an investor, but a very capable and resourceful sales-organizer. The SQUARE MAN for the SQUARE DEAL. You can have 100% of my local co-operation and the use of a Broadway address. Please state full particulars in first letter. ARTHUR RAY, 1947 Broadway, New York, N. Y.

OPPORTUNITY FOR DRILLERS to obtain acreage for test wells ranging from 400 to 2,200 ft. deep, in new field in Kentucky that will be the greatest shallow money making field in the country. Oil and gas is found in several pays. Field practically proven. Wells now drilling. Pipe lines near by, demand for all gas, easy drilling. Write Box E-177, The Oil and Gas Journal, Tulsa, Okla.

FREE ACREAGE, and drilling, for normal sum; semiwildcat; shallow oil field; Anderson County, Kansas. W. L. Morris Loan Co., Garnett, Kans.

POSITIONS WANTED

REFINERY ENGINEER—Technical graduate, seven years' experience, now with large Mid-Continent refiner, desires change. Want connection as engineer or assistant superintendent. Write Box E-182, The Oil and Gas Journal, Tulsa, Okla.

EXPORT EXECUTIVE

Desires connection with manufacturer as Export Manager, New York or London representative. Has recently completed six years sales and survey work in oilfields of Europe, Asia and South America. Thoroughly familiar with conditions in all foreign fields. Wide acquaintance among field executives and New York and London offices. Write, Box E-146, The Oil and Gas Journal, Tulsa, Okla.

FUEL OIL EXPERIENCE in its entirety. Charge office, traffic, credits and purchasing for years Chicago. Consider any position or city. Moderate salary. Write Box E-187, The Oil and Gas Journal, Tulsa, Okla.

POSITIONS WANTED

FIRST-CLASS draftsman, structural steel, refinery and general engineering experience desires position. Now employed. Write, Box E-179, The Oil and Gas Journal, Tulsa, Okla.

ROYALTY BUYER, now employed in Gulf Coast, wants connection with responsible individual or company. Salary or Interest Basis, good past record. Box 1232, Houston, Texas.

PRESSURE STILL EXPERT
Ten years experience in design, operation, development, and management of Pressure Stills and all equipment necessary for the processing of Cracked Distillates. Position must be one of responsibility and one where executive ability is necessary as well as theoretical and practical knowledge. Answer, Box E-190, The Oil and Gas Journal, Tulsa, Okla.

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DO YOU NEED an experienced man on your sales force, or in your purchasing material or warehouse department? 8 years in oil field supply business. Seven years with one of major supply companies. Familiar with cable tool, rotary tool and production equipment. References. Write, Box E-194, The Oil and Gas Journal, Tulsa, Okla.

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MAGNETOMETER—Askania vertical component type, practically new. In perfect order. Write Box E-181, The Oil and Gas Journal, Tulsa, Okla.

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WANTED: EXPERIENCED MECHANICAL ENGINEER for construction and maintenance in 15,000 barrel Oklahoma refinery. Married graduate preferred. Give full details and snapshot in first application. None other will be considered. Write Box E-170, The Oil and Gas Journal, Tulsa, Okla.

WANTED: Graduate chemist or chemical engineer by Mid-Continent Refiner for laboratory and plant development. Must have thorough training in chemistry and experience in testing petroleum products. Give full details concerning age, education, experience, salary expected, snapshot of self and references in application, otherwise will not be considered. Address Box E-176, The Oil and Gas Journal, Tulsa, Okla.

POSITIONS OPEN—Associate professor of petroleum production, experienced in oil production and geophysical prospecting, salary $3,600; assistant petroleum refinery superintendent, Mid-Continent Field, salary open. Write fully. Business Men's Clearing House, 213 Midland Savings Bldg., Denver, Colo.

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ADDRESSES WANTED

DR. STEWART MACKENZIE. Your old friend from the Royal Agency would like to hear from you. Important. Michael Murphy, 18 Pleasant Place, Tuckahoe, New York.

LESTER W. MARQUIS, oil field worker, by old friend. Important. Write Box E-188, The Oil and Gas Journal, Tulsa, Okla.

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LEASES—PRODUCTIONS

FOR LEASE—25,000 acres Prospective Oil Land in Coahuila, Mexico. Rights confirmed to owner by Mexican Government. S. R. Gonzales, Naranjo 2, Altavista. Tampico, Mexico.

FOR SALE—Lease on Red Coulee Structure, Northern Montana and Southern Alberta's new sensational Oil Field. Many new wells to be drilled immediately. Field now in production. Write us for information. Northern Investments, 303 Alberta Corner, Calgary, Alberta.

BUY CHEAP LEASE and royalty in Western Oklahoma ahead of development. For particulars write George F. Fisher & Son, 607 Cotton Exchange Bldg., Oklahoma City, Okla.

FOR SALE: 10 year oil and gas lease on 150 acres near Pauls Valley, Okla., in Sec. 13-3 North, Range 1 East. E. E. McDowell, Verden, Okla.

LIBERTY COUNTY, TEXAS—For lease, two tracts. 350 acres. One tract one-third of a mile from production. Address Gerald H. Hughes, Box 27, South Orange, N. J.

HAVE SEVERAL LOTS NEAR OKLAHOMA CITY oil field for lease with royalty. Address Owner, Maud L. Rosenberg, 515 East Ninth St., Drexel Hotel, Claremore, Okla.

2,000 ACRES LEASES for sale close to Ashland, Ohio. Completely surrounded by 3 major oil companies, offset wells now drilling on two sides. Good oil and gas territory. Priced for quick sale. Inquire of William E. Gebhart, West Main Street, Ashland, Ohio.

OKLAHOMA CITY BROKERS
We buy and sell leases, royalty, production, specializing in the South Oklahoma City field.
A. B. Al Hostick (Phone: 3-4441)
R. F. WORKMAN & CO., INC.
718 American National Bank Building, Oklahoma City, Okla.

FOR SALE: 40 acres gas and oil lease, Section 12, Block B12, Winkler County, Texas, Northeast Quarter $150 acre. John Loferski, 2253 South Sacramento Ave., Chicago, Ill.

HAVE GENUINE BARGAINS in leases, Lane and Finney Counties, Kansas. 25-cent rentals. Also royalties in major company blocks. Schrader, 1821 Classen, Oklahoma City, Okla.

PROVEN and unproven lands, leases, and royalties in Reeves, Ward, Pecos, Winkler, Culberson, Loving, Presidio, Hudspeth and Ector Counties. H. F. Anthony, Anthony Building, Pecos, Tex.

OIL LEASE
West half Section 166, Block B-2; W half Section 163, Block B-2; SE Section 20, Block 25, Gray County, Texas. Box 400, Groom, Tex.

TWENTY-YEAR, 88 form, oil and gas lease, 40 acres, 17 years more to run, Terrell County, Section 53-D.C. Rentals paid up. What is your best offer? Mr. C. Christianson, 1146 Mission Street, Yuba Hotel, San Francisco, Calif.

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Thirteen acres in heart Lost Springs (Kansas) Pool. Four producing wells near. Only reliable operators will be considered.
George Vest Tussey.
1008 East Forty-third Street,
Care Morrison,
Chicago, Ill.

FOR LEASE or drilling contract East half of SE¼ of Sec. 25, T. 6 N, R. 1 E. Hinds Co., Miss. Jackson anticline. R. Walthall, 512 W. 9th Ave., Amarillo, Tex.

I HAVE TWO 4,000 acre Blocks leased for oil and gas in Ill., near good producing oil field. Have geologist report and blue print showing complete structure. Would like to have it drilled on a royalty basis. Virgil Cox, Patoka, Ill.

FOR SALE: 700 acres gas production, eight producing wells. Maximum depth 875 feet. Also 225 acres, one producing second drilling. Last month's returns over $600.00. J. F. Farley, 206 N. Lawrence, Wichita, Kansas.

LEASES—PRODUCTIONS

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ACTIVE MINERAL AND OIL leases S. W. Okla. City, Cement Field and 50 miles East of Tulsa for sale by owner. L. E. Burton, Rt. 1, Walters, Okla.

OWNER OF 100 ACRES of land in Wood and Upshur Co. line, on G. Overton survey, would like to get in touch with oil producing companies desiring to lease. Location of this land between Quitman and Van productions. Address P. G. Rindone, 301 North Akard St., Dallas, Texas.

ECTOR COUNTY leases and royalty between Ector and Winkler pools, near Wurtz 4,000 ft. test now standardizing. Anderson, Linz Bldg., Dallas, Texas.

ROYALTIES—PRODUCTION

WE WANT good oil and gas royalties. Send us full information with reports. U. S. Royalties Corporation, C. A. Johnson Bldg., Denver, Colo.

DRILLING BLOCKS in Bell County, Texas, and adjoining counties. A. L. Monteith, Belton, Texas.

BROKERS AND SALESMEN wanted to handle royalty securities that offer big profits. Now paying handsome dividends. United Royalties, 415 Security Bldg., Los Angeles, Calif.

JACK COUNTY ROYALTY
Also, in other North Texas Counties, beginning now, deep drilling campaign. One-half royalty on one hundred acres up to one thousand acres. James T. Cumley, Wichita Falls, Texas.

OIL
Play your money safe—$100, half cash, buys choice lot College Park addition to Oklahoma City. Warranted deed, full royalty under Buttram Petroleum Co. community lease. Write or phone for particulars. George Fisher & Sons, 607-8 Cotton Exchange Bldg., Okla. City, Okla.

I HAVE MADE LUCKY BUYS in Western Oklahoma Royalties and will sell small part at a low price. J. P. Crawford, Petroleum Bldg., Oklahoma City, Okla.

OKLAHOMA OIL ROYALTIES
Royalty Sales Company
Suite 523 105 N. Clark St. Chicago.

$55 BUYS 1/64 of land owner's full royalty on 35 acres east of Van Pool. Leased to major company. Frank Clarke, Box 756, Tyler, Texas.

ROYALTIES UNDER ALL THE ACTIVE AREAS of Kansas, Oklahoma and Texas. Many on structures and under drilling wells. Spreads for the large or small buyer. For lists of Ector, Gaines, Loving Counties, Texas, and many Kansas blocks and western Oklahoma, write today. James R. Haynes, Grantville, Kans.

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WE HAVE 10,000 acres in Illinois declared by geologists to be promising. Desire to get in touch with someone who will drill for royalty and part of this acreage. Address Box 151, St. Jacob, Ill.

Two Perpetual and Fully Participating Mineral Deeds under two drilling wells in Young and Shackelford Counties, Texas. One is a major company 5,000 ft. test for $55.00 cash or $60.00 in three monthly payments you will receive two deeds under these two wells covering a total of 560 acres. Maps and completed details gladly mailed upon request.
ROYALTY A MONTH CLUB
CITY NATIONAL BANK BUILDING
WICHITA FALLS, TEXAS.

ROYALTY all new fields. Texas, Kansas, Okla. Core drilled blocks. Salt Domes. Lists—maps. Paul Haynes, Grantville, Kans.

WRITE FOR FREE COPY Rollison's Bulletin regarding royalties, leases, lands $5 per acre. Hot stuff. 711 W. Grand, Oklahoma City, Okla.

ROYALTIES—PRODUCTION

WELL SELECTED ROYALTIES, also oil and gas leases. Get big results through our buying and selling quotations. We work for repeating orders. Bank references exchanged. Write or telephone. Pioneers Company, 520 Cotton Exchange Building, Local Phone 3-3950, Long Distance 180, Oklahoma City, Okla.

NEW ROYALTY LIST under drilling wells Kansas, Oklahoma, Texas. Core drilled blocks. Maps free. Harry W. Haynes, Grantville, Kansas.

ECTOR, ANDREWS, GAINES. Active area and wildcat royalty. C. H. C. Anderson, Linz Building, Dallas, Texas.

FOR SALE: Perpetual Deeded oil royalty under Major Oil Company leases located in the active areas of Lea County, New Mexico. Also five year State Oil and gas leases, low rental, small investment, easy terms; oil development map free. Monarch Inv. Co., Roswell, N. M.

PERPETUAL ROYALTIES, on approved structures in Mississippi. Mississippi Royalties, Inc., Amory, Miss.

WILL SELL PART MY ROYALTY on 160 acres, Morgan County, Colorado. Structure now being drilled by Indian Territory company E. L. Michael, Arvada, Colo.

HAVE ½ royalty in 320 acres near Mid-Kansas test well of Blackwell in Nolan Co. Would consider trading part for equally promising royalty in Oklahoma or Texas. H. R. Bondies, Sweetwater, Texas.

SOUTH Konowa acreage with ¼ royalty, 31¾ acres Sec. 4-5n-6e. Address "Owner," 709 S. Main, Muskogee, Okla.

OIL ROYALTY—Send me $10 and I will mail you deed covering one acre undivided half royalty under the N. E. of section 20, township 4 north, range 19 west, Jackson County, Oklahoma. Western Oklahoma might be next. C. C. Devore, Altus, Okla.

ROYALTY — Southeast Van Zandt, Edom area. Dennis first wildcat to check on Van formation. Small interest up to one-eighth. R. R. Fisk, Box 1214-V, Wichita Falls, Tex.

BEDROCK ROYALTY PRICES ahead of drilling on major company blocks. $6 per square mile. Perpetual deeds and title warranty. Clearly stated and understandable interests. See maps and bulletins. R. R. Fisk, Box 1214-B, Wichita Falls, Texas.

STEVENS COUNTY and other Western Kansas Counties and Beaver County and other Western Oklahoma Counties royalties and leases.
Sain and Company, Liberal, Kans.

$100 LETS YOU IN for one-one-hundred-twenty-eighths royalty interest on 3 1/6 acres at Van, Tex; $50 gets half that amount. Two wells to be drilled on this tract. Only few royalty interests left, then our books close. Each interest covered by royalty deed. Write or remit. Guy J. Stumpff, Consulting Engineer, Van, Tex.

GEOLOGISTS

GEOLOGIST

Wall Street Financial House seeks the services of a Geologist who understands oil lands and who has experience with the major oil companies. Very attractive opportunity for man with proven record of accomplishments. Replies will be held in strict confidence. Address, Box 26, Room 902, 41 Maiden Lane, New York City.

FOR SALE—MAPS

OIL development and lease block map, central and western Oklahoma; size 17x 22 inches; price $1. Lindsay Map Co., Franklin Bldg., Oklahoma City, Okla.

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BULLETIN, containing information of priceless value to responsible parties seeking capital, yours upon request. Free analysis and advice cheerfully given. Moderate rates. Prompt. Service. Morris, Financing Specialist, 3608 Warren St., Philadelphia Pa.

FINANCE YOUR OWN project with shares bonded. Quickest, most satisfactory known method of raising capital. Information free. Bankers Interstate Security, Electric Bldg., Denver, Colo.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 2443 N. W. 12th, Oklahoma City.

CAPITAL — An experienced, dependable broker will aid in financing propositions of merit. Amster Leonard, East Orange, N. J.

INQUIRIES SOLICITED FROM CORPORATION interested in raising capital through marketing of corporate securities.
THE BROOKWORTH CO., INC.,
110 East 42nd St., New York City.

NATURAL GAS WANTED
Advertiser having financed several million dollars for corporation formed for the purpose of handling natural gas is desirous of securing additional deals requiring substantial amounts. All matters treated in confidential way and best of banking references furnished. Quick action.
BOX E-180
THE OIL AND GAS JOURNAL
101 Park Avenue, New York

CAPITAL AVAILABLE

We are in the market to purchase producing Oil and Natural Gas or Royalty Companies, or arrange to finance Companies of established merit and First Class Management. Correspondence invited.
DOUGLASS FENWICK & CO.
67 Wall Street,
New York, N. Y.

WANTED

WANT RESPONSIBLE DRILLING COMPANY to make test for oil and gas on Crowley's Ridge, Greene County, Arkansas. Offer lease proposition. Possibility of promoting organization to complete well. Quick action desired. Greene County Industrial Club, Box 296, Paragould, Ark.

WILL PAY cash for bargain in large, well-located Texas ranch. Owners only. Give full particulars first letter. Box 1796, Tulsa, Okla.

INQUIRIES SOLICITED from capital seeking attractive opportunity. Address Box E-185, The Oil and Gas Journal, Tulsa, Okla.

WE WANT GOOD PRODUCING GAS PROPERTIES in Wilson and Neosho Counties, Kansas. Give full description with last month's return and best price. Write, Box E-193, The Oil and Gas Journal, Tulsa, Okla.

CONTRACT WANTED: 2,000 to 4,000 foot well for cable tool string now located near San Antonio, Texas. Write, Box E-192, The Oil and Gas Journal, Tulsa, Okla.

RANCHES AND FARM LANDS

FOR SALE. Farm Bargain. On top of the Ozark Mountains. An estate of 490 acres, including two miles of White River. Highly improved; modern in every way; complete in every detail. Very productive. Two-thirds in cultivation. Ideal all-year-around home. Ten-room modern house with heat, lights, baths and running water. Cash or terms. Write owner, Charlie H. Clouston, Rogers, Arkansas.

(ADDITIONAL CLASSIFIED WANTS ON NEXT PAGE)

Spot Market Opens Quiet at Chicago

Contract Shipments Continue Large. Week-End Weather Not Quite So Favorable. Jobbers Being Offered Oklahoma Gasoline at 7 Cents

By J. B. Waldo

CHICAGO, May 12.—The spot market opened quiet and orders were slow. Major refiners state their contract shipments continue large but that they are not doing any spot business to speak of as their spot price of 7½ cents is too much above the going market to attract business. The week end was not quite so favorable as a week back being cloudy with a threat of rain and the number of cars on the country highways was not nearly as large as on the preceding Sunday. Still a good gallonage was had.

One reason why responsible jobbers who have the room to take in a car or two do not buy at the market is that they are being offered Oklahoma gasoline direct from responsible plants at 7 cents and kerosene at 4 cents for immediate shipment. To several of the larger jobbers offers are being made of slightly lower prices than those named. Gasoline for resale was offered several in this city today at 6¾ cents and regarding quality it was stated the gasoline would pass both North and South Dakota specifications. Country jobbers are still well supplied with gasoline. They are doing a good business, better than a year ago in practically all cases and some report remarkable gains in gallonage. The demand for the higher gravities was light and the 400 endpoint was still offered to jobbers at 7¼ cents by a leading refiner.

Kerosene moved in a small way, several leading refiners now asking 4¼ cents but the ideas of the trade were 4 cents. There were quite a number of inquiries for gas and fuel oil by industrial users but usually for small amounts. The market price was paid, as in most cases the oil was wanted promptly.

The weather was much cooler Monday but promised to continue fair. So far May has been really a phenomenal month in this city where it is not usually so pleasant.

Gasoline Sales Good

With excellent weather conditions prevailing distributors state that their gasoline sales are well over those of last month and the corresponding period for last year. There is wider demand in the spot market, but the larger distributors still have plenty of gasoline. They have even added to their storage during the last week as gasoline was offered to them at attractive quotations. Orders against contracts continue excellent. There is no complaint regarding the contract business, except that the refiners would like a few more good contracts.

The price situation was unsettled last week by unexpectedly low quotations. It has been impossible actually to say who was making the quotations. Of course, they came in part from market letters from Group 3, in which "U. S. Motor gasoline, 58-60 437, D.&C.," was quoted at either 6¾ cents or as some of them stated, "6⅞ cents but think can do ¾s." But there was more to the low prices than market letters, which must quote low if they are to bring in any business.

The manager of a local refinery, called on the phone, quoted his price as 7¼ cents, Group 3, and was told that that price would not bring the order. He refused to go any lower. It was one of his steady customers who asserted that he could buy all the U. S. Motor gasoline he wanted to order at 6¾ cents, full specifications.

Refiners Holding Prices

Refiners both in the Middle West and in the Mid-Continent Field have been holding their prices with firmness, at least on the U. S. Motor grade. One large Oklahoma refinery did quote a price for a day or so of 7 cents the group for its U. S. Motor grade, but the price was not generally made and was attributed to the fact that this refiner has a large Texas business which might have suffered from the storms of last week. The result might be some temporary accumulation of material. The fact that a half dozen market letters quoted a price of 6¾ cents for U. S. Motor gasoline does not necessarily mean that there were a dozen cars available.

If there is any class of men in the industry who at present are anxious for a firm gasoline market, it is the local marketers. Most of them have gasoline bought for May delivery and sold at prices which they are beginning to be afraid will not stick. Gasoline sold at 7¾ cents for delivery the last half of May will hardly be taken out at the agreed price if the spot market is even a little less than that figure. So the local marketers are most anxious to have the market hold that their sales may go through. The usual price for the smaller refiner and the tank car marketer is 7¼ cents, Group 3. There is a little that can be had at 7⅛, all good gasoline.

Distress Gasoline in the Market

Some distress gasoline is still in the market, most of it the product of a single refinery which had not been shipped at the close of April although bought for April delivery. The refinery did not cancel the unsold portions of the orders but is permitting its customers to apply these on May deliveries. There may be a hundred cars in all, much of which has been worked off at 6¼ to 6½ cents to the marketers and at 6½ to 6¾ cents to the jobbers.

The movement of 60-62 400 endpoint has not been good and one of the larger well-known organizations has been selling this product at 7¼ cents, Group 3. This is not the lowest price at which the grade has been offered in this market but none other was of such a well known origin. The export demand for the export gravities has maintained the price here and strengthened the market a little.

With a continuance of this wonderful May weather, the heavy consumption cannot but increase jobber buying of all grades, specially of U. S. Motor and of Ethyl, the latter having such a heavy run that its makers are increasing their capacity for its production.

The tractor season is over at least until the time for the small grain harvest and even then the quantity required of tractor fuel is not important. The kerosene market is quiet and some refiners are quoting 4⅛ cents direct to the trade. Others are holding for 4¼ cents, but the tone is easy and plenty of kerosene is to be had if wanted. The demand for distillate as tractor fuel is also over. Both kerosene and prime white distillate are quiet and rather easy in tone.

Furnace Oils Dull

There is nothing doing in the way of present business in furnace oils. By the rather clever device of basing the price to be paid under the contract on some published quotation at the date of shipment, the contract is left indefinite in the very thing that the jobber wants to know and that is what his oil will cost him. All that the jobber can do is to make an elastic contract with his customer so that any increase in cost of the oil may be passed on to the consumer. There is some movement in the lighter fuel oils which are used the year around by some of the smaller industries and by some of the domestic service plants such as bakeries and laundries. The prices on these grades have shown little change, being on a sort of summer basis right now as to price.

The heavy industrial fuel oils are decidedly easier in tone as well as some lower in price. The demand is just about holding its own as to total volume. There are some new evidences of the slackening movement in some important industries. The vice president in charge of sales of a leading refining and marketing organization stated that there was a general feeling of uncertainty abroad which prevented many worth-while projects from being undertaken largely because of doubt as to whether they would pay.

Anxious to Move Fuel Oil

There were several refinery managers and sales managers in the market last week all anxious to move stocks of fuel oil. Most of them had considerable 18-22 and some of a heavier gravity. The usual asking price for the 18-22 gravity is 55 cents, Group 3, but so much oil is being offered at that price that the trade doubts if the price will hold unless refiners withdraw some of their offerings. The oil from the East Chicago plant of the Empire Oil & Gas Co. is quite generally spoken of as an 18-22 oil, but it is really a much higher gravity, 22-24 with a low sulphur content a moderate but sufficient cold test and a viscosity of 600 at 100. This oil was offered to marketers for resale at 55 cents last week though there was talk of asking a higher price for it.

The Shell is holding for 60 cents for its 18-22. It has some material for sale temporarily but has contracts calling for a large quantity over the fall and winter. These local refinery stocks are not generally available outside of the Chicago switching district owing to high short-haul freight charges. Much heavy oil has been bought by some of the local fuel oil dealers in Wichita Falls and is coming to this market as a cheaper oil than 18-22. It is stated to be a 14-16 gravity with a 35 cold test and not too high viscosity. The cost is 47½ cents, Group 3, basis and two or three dealers have been active in pushing its sale.

No Demand for Zero Oils

There is no demand for zero oils and the prices are now based on ordinary refinery temperatures. This fact releases some fuel oil that would not be accepted in cold weather and has a tendency to add to the supply. The actual demand is rather light. Many regular users are drawing against contracts and have not found it necessary to buy more oil, in fact they are not taking out their purchases any too well. Contracts are being worked at and some are being renewed.

Refiners say they are getting a little better prices than previously. There is talk among the refiners about shortages of desirable fuel oil for next winter but the trade does not seem worried. Dealers are trying to set a line on the territory to be served by natural gas when it is brought to Chicago within a year or so. They find that the plans of the gas companies are comprehensive, but there will be business left for the fuel oil industry. Some figure that the natural gas will have to be sold at 40 cents a thousand to be a really dangerous competitor of oil as fuel.

Straight run gas oil has been inquired for in a small way and last week it was reported here that there was such a demand for gas oil for cracking stock that it was practically unobtainable except at much higher prices. While some of the trade here was thinking the situation over, in came an offer from one of the best refiners in Oklahoma whose gas oil would be accepted by any buyer, offering 50 cars at a low price. There was a local situation which accounted for the offer, but the trade wondered why, if gas oil was in such demand, did this refiner have to go out of his own state or city for that matter to find a buyer?

Market Fairly Steady

The market remains fairly steady at 2⅜ to 2½ cents to the consumer and while 2¼ cents to buy is a good price it can be had, and for quantities in some spots. There is some business to be had for spot shipment, but it is not large nor is the demand active. It is around the time of the year when gas companies will make contracts if the price is right and a lot of figuring is being done, sometimes with good results. The purchasing agents have their ideas pegged pretty low and are loath to move, preferring to await developments.

There has been little more of the talk of a crude advance to be followed by a tank wagon advance. The opinion is almost unanimous that a crude advance today would be a mistake which would cost the industry dearly. The main reasons suggested for the change in the outlook from what it was a few weeks ago are the undeveloped possibilities of the Oklahoma City Pool as well as actual increases in production elsewhere. As to a tank wagon advance in this or any territory, these do not necessarily depend on some change in crude prices. A firmer market all along the line, even if crude be unchanged, would be reflected in the prices to the public as well as the buyer in tank wagon lots. Generally the price structure is holding well although a small price war has broken out in Ohio where three major distributors are involved.

Locally there are about the usual number of price cutters and at present no one semes to be paying much attention to them. They operate usually at a few cents under the service station price and at present quotations they can do so and supply their trade with fair gasoline. Quite commonly the product sold has been a blend of a Texas naphtha and BB natural gasoline. At one time recently the combined cost of the material was 4¾ cents, Group 3, but this cost would be higher now. This would be considered good motor fuel compared with some of the stuff that is sold. There seem to be those who will buy anything if it is cheap while others are not satisfied with Ethyl.

CLASSIFIED WANTS

(Continued from Preceding Page)

INCORPORATIONS

CHARTERS—Delaware best, quickest, cheapest, most liberal. Fee forms. Colonial Charter Co., Wilmington, Del.

DELAWARE incorporator. Charters fees small, forms. Charles G. Guyer, 901 Market St., Wilmington, Del.

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Tank Car Price Advance Helps in East

Standard of New Jersey's Action in Going to 9 Cents Taken as Sign of Fundamental Improvement in Market Conditions

By A. E. Mockler

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, May 12.—The principal development of the past week, aside from the substantial increase in gasoline volume, was the action of Standard Oil Co. of New Jersey in advancing the tank car gasoline market a half cent to 9 cents per gallon. Practically all of the other major marketers in this area had been quoting 9 cents or better for some time, Colonial being the last to fall in line, advancing its price to 9 cents early in the week. A number of sellers in this area have been quoting as high as 10 cents per gallon, but the fact that the New Jersey company was still adhering to the old 8½ cents posted basis had tended to hold back the general market.

Action of the New Jersey company in going up to 9 cents is important more from the standpoint of moral effect than anything else. The New Jersey company has taken a strong stand against "rushing" the gasoline market, and the fact that this market leader considers an advance justified at this time is taken as an indication of real improvement in fundamental market conditions.

Developments of outstanding importance have been lacking in other divisions of the refined products market during the week. Conditions have been more or less spotty on all products save gasoline and fuel oil and hand-to-mouth buying has been much in evidence. While confidence in the market position is stronger now than at any time hitherto in 1930, buyers are still awaiting a demonstration of definite stability before abandoning their routine buying policies.

General expectation of another increase in crude oil prices in the Mid-Continent is evident in local market circles this week.

Tank Car Gasoline

Standard of New Jersey, which advanced its price one-half cent per gallon, effective May 9, is now on a 9-cent basis, the highest price reached thus far in the year. Other refiners and marketers are quoting variously from 9 cents to 10 cents per gallon at refinery terminals.

Favorable weather conditions throughout the East have resulted in a sharply increased consumption of motor fuel, and temporary shortages of gasoline have developed in one or two instances, forcing marketers to buy gasoline in the open market to take care of their requirements until they could move some of their own stocks to the markets affected.

Sentiment among refiners is decidedly bullish, in so far as gasoline quotations are concerned. If the spring season continues as favorable, from a weather standpoint, as it has been thus far, a 10-cent posted price for U. S. Motor gasoline at terminals is looked for as a general thing by the end of the month.

A sustained spell of good weather throughout the rest of the spring season would be something of a rarity for the oil trade in this territory. For the past several years, spring sales have been retarded by cold rainy weather and the summer season has arrived virtually overnight.

Stocks of gasoline held at East Coast refineries are by no means excessive at this time, and there is nothing in the shape of distressed motor fuel on the market. From a statistical standpoint, the East Coast market will go into the summer season in favorable position.

Tank Wagon Gasoline

Exceptionally warm weather throughout the entire East Coast area this week has made for heavy consumption of motor fuel, and tank wagon sales are running at the highest levels attained thus far in 1930. The demand is active for both U. S. Motor and premium fuels, and tank wagon delivery departments have been working overtime throughout the week in keeping retailers' tanks filled.

The price structure has firmed up appreciably throughout the area and continuance of the present weather for the balance of the month, it is believed, would bring about another general upward move of 1 cent a gallon on the part of the principal marketing interests. The firmer refinery gasoline market this week has brought about a decidedly bullish feeling in tank wagon markets, and has tended to minimize price cutting competition on the part of the smaller independents.

Kerosene

The jobbing market presented a quiet appearance throughout the week, the unusually warm weather having substantially cut consumption. The posted price holds unchanged at 7¾ cents per gallon for 41-43 water white at nearby refineries, but this price is the exception rather than the rule in current trading, and 7¼ cents, refinery, appears to be the going price in tank car sales. Kerosene stocks are fairly large in this area, holdings having shown some accumulation this week, and a cut to 7¼ cents in the "official" posted price would not come as much of a surprise to the trade.

Tank wagon distribution of kerosene has naturally slowed down, due to warm weather conditions, but principal marketers have made no revisions in tank wagon prices in this area. Some adjustment may be made in the event of a lowering of the posted price basis at the refineries, however.

Fuel Oil

Bunker "C" continues to move freely to the marine trade, and the market is held steady at $1.15 per barrel, in bulk, f.o.b. refinery terminals. Contract withdrawals are accounting for most of the business in this area, but there is a moderate amount of spot buying from day to day, with the posted price adhered to.

Domestic consumption of fuel oil has been rather light during the week. Weather conditions have been such that a material curtailment in the use of fuel oil for heating has been made possible, and this development is felt in refiners' sales totals. Industrial movement of fuel oil is holding about steady, however.

Diesel Oil

Development of smaller Diesel motors for powering pleasure craft is attracting a good deal of interest among refiners, and it is expected that consumption of this oil will show steady expansion during the coming years as this trend in pleasure boat powering develops.

In addition, there is a growing trend toward the use of Diesel power for industrial purposes, and, in some cases, large Diesel units are being used to generate power in large factory and office buildings. All of this development, it is felt, will be reflected in steadily widening sales outlets for the fuel.

Refiners continue to quote the Diesel oil market firm at $2 per barrel, in bulk, f.o.b. refinery terminals. A number of large vessel operators are current drawing Diesel oil in substantially larger volume than was the case last year at this time, and it is estimated that sales of this oil to the marine trade will show a gain of between 10 and 20 per cent, on the average, for the full year 1930 in this area. Much of this business is under contract, but some buyers are still covering a part of their requirements through purchases in the open market.

Gas Oil

Conditions are without appreciable change in the gas oil market this week. The posted price of 28 plus oil remains unchanged at 5¼ cents per gallon, bulk at refineries, but the bulk of current business is going through at a quarter to a half cent per gallon under this figure.

Sales have shown some falling off since the start of the current month. Warm weather has curtailed the use of gas oil for domestic heating purposes, and the advent of daylight saving has brought about a falling-off in volume of this oil used by the gas manufacturing companies in this area.

Lubs

The recent cut in Pennsylvania crude oil prices has offset in some measure the seasonable increase in consumption of cylinder oils, and no changes in prices have developed thus far. Bright stocks are in strong position, but on other grades the market still lacks stability in some cases.

Domestic buyers were in the market in slightly better volume during the week, but demand has not yet attained the proportions which refiners had looked for. The long spell of warm weather in this area, however, is stimulating lub oil sales materially, and sellers expect that compounders and blenders will be back in the market for replacement supplies shortly and that a heavy buying movement will then develop.

Red and pale oils are showing a fairly steady undertone in the local market. Domestic consumption is holding up well, and tank car movement is fairly active. Export buyers are also taking stocks of these oils in good volume, and week-to-week export shipments are holding up well.

Refiners distributing package lub oils under their own brands are quoting prices somewhat under those in effect last year at this time. On bulk oil sales of leading brands of lubs, the market is fairly well stabilized at 25 cents per quart in filling station sales.

Paraffin Wax

There were no price changes reported during the week, but the market undertone appeared to have firmed up slightly, and there was less selling pressure evident. Refiners are still carrying excessive surplus stocks in many instances, however, and buyers are bearish in their price views.

Export inquiry for both crude scale and refined grades picked up a little, and the outlook favors an early increase in actual business. Domestic buyers, however, are still generally adhering to a hand-to-mouth buying policy.

Gulf Export Market

The only open-market business reported during the week was the closing of a cargo of 6,000 tons of 64-66 and 2,000 tons of Navy at the Gulf, for shipment to France. The cargo was booked at the posted price basis, according to reports here.

Considerable gasoline is moving into export channels from the Gulf, but the great bulk of this is placed on private contracts, and details do not reach the general market. A number of the large companies are understood to have established new high records in export shipments during March and April.

Nothing definite has been forthcoming as yet in regard to an increase in posted prices for gasoline at the Gulf, but the trade looks for early action in that direction.

Fuel oil has firmed up at the Gulf, with most sellers now quoting 78 cents per barrel in cargo lots, an advance of 3 cents per barrel over recent quotations. Movements is rather light. Fuel oil out of Tampico is offered at 75 cents per barrel.

The kerosene market at the Gulf has been inactive, with small-lot buying the only feature during the past several weeks.

Petroleum Exports

Spotty conditions continue to prevail in the East Coast export market, with shipments still of routine volume. Exports of refined petroleum picked up during the week, and wax movement was also heavier. Naptha shipments increased but lub oil movement, while fairly heavy, was smaller than the exceptionally heavy total recorded for the previous week.

Export operators are watching the situation closely, and it is felt that any definite signs of an upswing in prices will be reflected by a substantial improvement in actual volume of sales.

The following table shows principal exports of refined petroleum products from New York for the past three weeks (all figures in barrels unless otherwise noted):

	Week ended—		
	May 3	Apr. 26	Apr. 19
Gasoline	220,000	505,000	211,000
Naphtha	964,000	3,000	260,000
Kerosene	50,000	1,200,000	153,000
Fuel oil	10,000	257,000	27,000
Lubricating oil	1,240,000	4,836,000	1,530,000
Petroleum, refined	1,758,00	210,000	973,000
	Pounds—		
Petrolatum	38,000	.....	66,000
Paraffin wax	1,050,000	1,686,000	888,000
Refined	846,000	4,000	10,000
Scale	1,125,000	143,000	180,000
Lubricating grease	1,095,000	700,000	1,022,000

Exporters of cased kerosene and naphtha report a good inquiry for stocks for shipment to Africa and the Far East, with a fair movement to South American countries also reported. The market tone is firm due to the general expectation of an early advance in the Gulf export basis, which would be reflected in the East Coast market.

Imports

Imports of crude and refined petroleum at principal United States ports for the week ended May 3 totaled 1,955,000 bbls., a daily average of 279,286 bbls., compared with 1,908,000 bbls., a daily average of 272,571 barrels for the previous week. Details follow:

(Barrels of 42 Gallons)	
At Atlantic Coast Ports—	
Baltimore	95,000
New York	1,148,000
Philadelphia	293,000
Others	223,000
Total	1,759,000
Daily average	251,286
At Gulf Coast Ports—	
Galveston district	59,000
New Orleans and Baton Rouge	37,000
Port Arthur and Sabine district	65,000
Tampa	35,000
Total	196,000
Daily average	28,000
At all United States Ports	
Total	1,955,000
Daily average	279,286

Distribution of total imports is as follows:

Crude	1,284,000
Gasoline	275,000
Kerosene	5,000
Fuel oil	391,000

Gasoline from South America is moving into consumption largely at Gulf Coast and South Atlantic ports, it is indicated, with a moderate increase in import volume of motor fuel anticipated during the next three months, when consumption in the United States is normally at peak level for the year.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic and Gulf Coast ports for the week ended May 3 totaled 517,000 bbls., an average of 73,857 bbls. per day, compared with

442,000 bbls., or 63,143 bbls. daily, for the previous week. Details follow:

(Barrels of 42 Gallons)

At Atlantic Coast Ports—	
Boston	95,000
New York	293,000
Total	388,000
Daily average	55,429
At Gulf Coast Ports—	
All ports	129,000
Daily average	18,428
At Atlantic and Gulf Coast Ports—	
Total	517,000
Daily average	73,857

Distribution of total California oil receipts is as follows:

Kerosene	372,000
Gas oil	50,000
Fuel oil	95,000

Shipments of refined products from the Pacific Coast eastward for the week (with identity of company owning tanker moving the oil where such owner is an oil company) follow:

To New York—94,500 barrels of kerosene distillate on the Empire Arrow (Standard Transportation Co.—S.O.N.Y.); 14,400 bbls. of paint and varnish distillate on the Hugenot, and 64,400 bbls. of gasoline on the Hugenot.

To Philadelphin—116,400 bbls. of gasoline on the Sunoil (Sun Oil Co.)

To Baltimore—47,500 bbls. of gasoline on the Kekoskee (Richfield Oil Co.)

To Providence—97,000 bbls. of gasoline on the Sylvan Arrow (Standard Transportation Co.—S.O.N.Y.)

LA.-ARK. FIELDS

(Continued from Page 56)

the field and to fuel his own and others' drilling operations.

Hope Oil Co. completed No. 5 Urania, Section 19-10-1e, LaSalle Parish, pumped 20 bbls. of oil from 1,560 feet and Arkansas Fuel Oil Co. is preparing to abandon its deep test in Urania, No. 5-F Urania, a Tullos Townsite well in Section 24-10-1e, at around 6,400 feet.

Six Wells and One Failure

Six wells and one failure were completed in northeast Louisiana gas territory. Arkansas-Louisiana Pipe Line Co.'s No. 4 Rea & Green, Section 82-18-4, Ouachita Parish, made 852,000 feet at 770 pounds from 2,210 feet and Louisiana Gas & Fuel Co.'s No. 2 Breard, Section 45-18-4, made 951,000 feet at 850 pounds from 2,182 feet. Hope Producing Co.'s No. 3 Fairbanks, Section 36-20-4, was junked and abandoned at 2,332 feet. Industrial Gas Co.'s No. 1-B Jenny, Section 33-21-4, Union Parish, gauged 5,072,000 feet at 940 pounds, total depth 2,115 feet, and Sabine Producing Co.'s No. 1 Morgan, Section 11-20-3, gauged 2,813,000 feet at 990 pounds, total depth 2,190 feet. In Richland Parish Palmer Corp. completed No. 9 Rhymes, Section 4-16-6, at 2,450 feet, gauging 3,133,000 feet at 550 pounds and Southern Carbon Co.'s No. 1 W. E. Landers, Section 10-16-6, made 38,952,000 feet at a total depth 2,445 feet.

Sarepta district of Webster Parish, about 8 miles north of Cotton Valley, attracted attention when S. H. Riggs' (now Merrick Oil Co.) No. 1 Slack in the SW SE, Section 36-23-11, was completed, flowing 350 to 500 bbls. of fluid, about 50 per cent water, and an estimated 5,000,000 feet of gas from 2,742 feet with the bottom 2 feet in sand. Most Sarepta wells are pumpers averaging 55 bbls., there being only one or two other flowing wells at this time and it is for this reason that this particular well drew the attention it has. Merrick is rigging up on No. 2 Slack and is reported to have locations for 10 wells in the same quarter section and another operator is reported planning six more. There are nine operations under way in the field at present.

French Well Gets Show

C. H. French's No. 2 Biedenharn, Section 23-21-14, Bossier Parish, across Red River from the Dixie district of Caddo Parish, had a show of oil at 2,004 feet in two feet of sand and shut down for orders. Location is about 700 feet north of Nell & Lanier's No. 1 Biedenharn in the same section, which pumped a small amount of oil from 998 feet, but was abandoned last month as a dry hole.

Louisiana Gas & Fuel Co.'s No. 1 Crystal Oil Refining Corp., a deep test in Section 7-21-11, near Ivan, 7 miles northwest of Bellevue production, set 414 feet of 12½-inch for surface string. H. I. Morgan's Bellevue deep test, No. 4 Wetherbee, Section 21-19-11, the fourth such he has drilled on the flanks of the Bellevue Dome, tested 5,000,000 feet of gas in 10 minutes from 1,920-30 feet but will go deeper. About 5 gallons of gasoline condensed out during the 10 minutes the well was blowing through the drill stem.

Two new wildcats were started and location for a third was abandoned in Union Country, Arkansas. Carter and others are rigged up on No. 1 Burnside in the SE NE, Section 13-18-14, Urbana district, and Arkansas Natural Gas Corp. has rig up for No. 1 Burns in the NE NW, Section 14-18-17, 10 miles west of El Dorado South Field production. Magnolia Petroleum Co.'s No. 1 Alice Gregory in Section 15-17-14, Champagnolle deep test, deepened from 2,852 feet where it was a 48,000,000-foot gasser at 1,000 pounds in August, 1928, was abandoned at 3,600 feet without having found anything to test. Federal Petroleum Co. and Union Sawmill Co. abandoned location for No. 1 Union Sawmill Fee in the NW NE, Section 9-18-13. Gold Creek Oil & Gas Co.s No. 2 Stermer, a rig in the NW SE, Section 17-4-13, Faulkner County, has been dropped from the report, most of the leases in the block having expired and not been renewed due to ill health of the owner of the majority interest in the enterprise.

MICHIGAN FIELDS

(Continued from Page 62)

project by the Muskegon Pipe Line Co. has aroused more interest in the western Michigan Field than for several months. Production in the known pay sands has been gradually decreasing until it is estimated to be about 4,000 bbls. The Muskegon Field today is looked upon as the best wildcat proposition in the State because it has three known pay sands and can be drilled to at least two and possibly three other pay sands in less than 5,000 feet.

Drilling must start before June 10 on a tract released by the Joliet-Morris Development Co. The purpose is to test the Monroe, Niagara and Trenton formations. A fund of $25,000 will be raised immediately among operators whose acreage will be proved in the lower formations by drilling of the deep test.

Mount Pleasant

Two completions, one a comparatively small oil producer in the Dundee formation and the other a dry hole on a semiwildcat location, were completed in the Mount Pleasant Field.

The Dixie Oil Co.'s No. 2 N. Davis, SE SW, Section 2-14-3w, came in at 3,561-87 feet and had initial production of 175 bbls. Dundee limestone was topped at 3,518 feet and the hole was completed at 3,587 feet. The Pure Oil Co.'s No. 1 J. Davidson, NE NE NE, Section 24-14n-3w, Chippewa Township, Isabella County, is to be plugged and abandoned at 3,666 feet.

Good shows of gas were struck in the Marshall formation at about 1,100 feet in both the Dixie-Davis No. 4 and E. Brown's No. 2 Grubb, near the Sias-Muma well which some time ago had a good show of gas in this upper formation. A show of Marshall gas and black oil also was struck in the New York Petroleum Royalty Co.'s No. 1 P. J. Marthy, SW SW SE, Section 19-15n-3w, Denver Township, Isabella County.

Formations are running high in the Clare Development Co.'s No. 1 Mary Hubel on the outskirts of Clare, SW SW, Section 27-17n-4w, Grant Township, Clare County. It is drilling at about 3,200 feet.

There is destined to be considerable activity between this well and H. E. Pollock's No. 1 Anna Bowman, SE NE, Section 27-16n-4w, Vernon Township, Isabella County, which was brought in about March 25 and is good for about 75 bbls. in the Dundee.

New Permits

Three new permits have been issued in the proven Mount Pleasant Field of central Michigan. Three others are to be drilled on wildcat locations, one in Allegan County south of the Muskegon Field, another in Cass County in the southwestern corner of the State and the other in Monroe County in the southeastern corner of Michigan. The Mount Pleasant wells will be Dixie Oil Co.'s No. 5 N. Davis, NE SE SW, Section 2-14n-3w; same company's No. 6 N. Davis, SE NE SW, Section 2-14n-3w, and the Stork Oil Co.'s No. 1 Sawade and others, SW SW, Section 2-14n-3w, all in Chippewa Township, Isabella County.

Blair and Miller's No. 1 Shippy, SE NE, Section 32-7s-13w, Porter Township, Cass County, the new southwestern Michigan wildcat, started this week probably will be completed next week.

KANSAS FIELDS

(Continued from Page 52)

tion 36-20-9, has been abandoned at 2,571 feet.

Cowley County

Tom Fine made location for No. 1 Boyd, NW cor. NE, Section 32-32-4. Hull and others' No. 16 Wallace, NW cor. NE SE, Section 24-30-4, has been completed for 100 bbls. in sand 2,969-3,044 feet. McNabb & Bess' No. 1 Johnson "A," SE cor. NE SW, Section 2-33-3, made 50 bbls. in sand 3,257-3,300 feet. No. 1 Johnson "B," SE cor. NE NE, Section 29-33-3, has been completed for 125 bbls. in sand 3,243-98 feet.

Greenwood County

The Texas Company's No. 1 Blanck, SW cor. NW SE, Section 29-22-13, is making 40 bbls. from sand 1,663-95 feet. Phillips Petroleum Co. and others' No. 3 Blanck, NE cor. SW SE, Section 29-22-13, has been completed for 45 bbls. in sand 1,720-35 feet.

Harvey County

McPherson Oil & Gas Development Co. and Shell Petroleum Corp.'s No. 2 Haury, C SE SE, Section 11-23-2w, is a dry hole at 3,009 feet.

Leavenworth County

Forrester and others' No. 1 Yazel, CEL SE SE, Section 18-12-22, is dry and abandoned at 1,546 feet.

McPherson County

Barnsdall Oil Co. is building the rig for No. 5 Krehbiel, SE cor. NW SE, Section 4-21-3w, Voshell Pool. Sinclair Oil & Gas Co.'s No. 4 Morehouse, SW cor. SE NE, Section 4-21-3w, is a rig being built. No. 5 Morehouse, NW cor. SE NE, Section 4-21-3w, is also a rig building. Shell Petroleum Corp. is erecting the rig for No. 1 Neufeldt, NW cor., Section 15-21-3w. Empire Oil & Refining Co.'s No. 4 Voshell, NW cor. SE NE, Section 9-21-3w, has been deepened to Silicious lime 3,352-60 feet and completed for 1,450 bbls. The Texas Company's No. 1 Stucky, NW cor. SW SW, Section 10-21-3w, Voshell Pool, has been deepened to Silicious lime 3,451-53 feet and then plugged back to 3,406 feet where it made 375 bbls. The Texas Company's No. 2 Stucky, SW cor., Section 10-21-3w, has been completed for 947 bbls. in Wilcox sand 3,391-3,407 feet. Shell Petroleum Corp.'s No. 3 Koehn, NW cor. NE NE, Section 16-21-3w, made 947 bbls. in Wilcox sand 3,388-92 feet. Darby Petroleum Corp.'s No. 1 McPherson College, NW cor. SE SW, Section 13-20-2w, is dry and abandoned at 3,763 feet.

Morris County

Arrow Oil & Gas Co.'s No. 1 Wilde, NE cor. SE SE SE, Section 15-17-7, is rigging up to deepen from 570 feet.

Pratt County

O'Haver, Jones and others' No. 1 Gereke, NE cor. SW, Section 7-26-14w, is a dry hole at 4,743 feet.

Rice County

Hollfine, Lee, Lee and Shell Petroleum Corp.'s No. 1 Sledd Farm Corp., C SW, Section 33-19-6w, is moving in.

Sedgwick County

Shell Petroleum Corp. and Jones' No. 1 Brown, NE cor. SE SE SW, Section 15-26-2, has been completed for 330 bbls. in Viola lime, 3,217-19 feet.

Sumner County

Lario Oil Co. and others' No. 12 Wenrich, SW cor. NE NW, Section 23-32-2, has been completed for 435 bbls. in sand 1,995-2,090 feet. Gypsy Co. is building the rig for No. 2 Enderud, NW cor. SW SW, Section 16-35-3w.

GOVERNMENT CAN OFFSET IN CALIFORNIA RESERVE

WASHINGTON, D. C., May 10. The Committee on Appropriations has recommended appropriations for care of the Navy petroleum reserve stating that no operations are going on within Teapot Dome in Wyoming and operations outside of the dome it appears are having practically no effect upon the reserve.

The committee remarks that should private holders commence operations in Reserve No. 1 in California immediately on their side of the line inestimable loss of oil and gas, or their money equivalent, would ensue. In order that the Government would not be defenseless in such a contingency the committee approved a recommendation by the Budget that the President shall have authority to expend out of any current naval appropriations a sum not to exceed $10,000,000 for drilling offset wells. There are 14 miles of boundary open to attack which would require a maximum of about 225 wells estimated to cost on the average $60,000 per well.

The committee reports that the principal increase for fuel occurs in the item of fuel oil which, while estimated to cost approximately 5½ cents per barrel less, will be used in greater quantity owing to more oil-burning vessels operated and to a somewhat larger steaming program.

Pursuant to the project adopted last year of filling the fuel oil tanks at Pearl Harbor, which have a storage capacity of 4,000,000 bbls., it is expected, by June 30, next, to have increased the oil in such tanks to 2,605,863 bbls., leaving the net available space at that time 1,394,137 bbls.

An immediate appropriation, enabling the Secretary of the Navy to conserve and operate the Naval petroleum reserve is made in the sum of $175,000 of which $100,000 is to be used exclusively to repair shut-in wells in Naval Petroleum Reserve No. 1.

A.I.M.E. SPRING DINNER

The Mid-Continent section of the American Institute of Mining and Metallurgical Engineers will hold their annual spring dinner at the roof garden of the Tulsa Club at 7 p.m. Monday, May 26.

The program committee has arranged several special features for the entertainment of the members and their guests. Part of this time will take the form of "reminiscence" and everyone will be asked to tell a story illustrating some past experience of an unusual type. Last year a like period was devoted to a "Believe It or Not" session and this proved so popular that the general idea is to be used again this year.

FORM MIDLAND GAS CO.

NEW YORK, May 10.—Interests affiliated with E. R. Riggs & Co. formed the Midland Natural Gas Co. to own and operate a combination of 26 natural gas properties in Pennsylvania and West Virginia.

The Pennsylvania properties are located in Washington and Greene Counties, and the West Virginia properties in Monongalia, Marion, Harrison, Doddridge, Ritchie, Gilmer and Fayette Counties.

The properties total about 15,000 acres, on which are about 160 producing wells and an open flow capacity of more than 6,500,000 cubic feet daily.

MAGNOLIA P. L. STATEMENT

The Magnolia Pipe Line Co.'s report for April covering Oklahoma and Kansas shows runs of 2,022,775 bbls.; daily average, 67,426 bbls.; shipments, 2,365,120 bbls.; daily average, 78,837 bbls.; stocks, 6,764,079 bbls. Since the opening of the year the company has reduced its crude stocks in Oklahoma and Kansas 830,881 bbls.

Natural Gasoline Manufacture

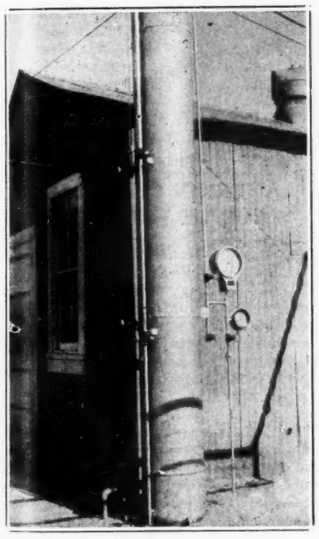
Perfect Method of Detecting Losses In Gasoline Lines

By Frank P. Peterson

The transportation of natural gasoline through pipe lines is attended, always, with losses, unaccountable and otherwise. These losses occur from leaks developing from sundry causes, such as erosion, expansion and contraction which loosens joints and connections, minor leaks through valve stem packings, etc. Most annoying of all losses are those resulting from tapping of the lines and theft of the gasoline. It is surprisingly difficult to apprehend and punish these line thieves.

Continual, normal losses occur in handling the product, due to evaporation. These losses cannnot be definitely determined unless losses due to other sources can be accurately measured.

F. E. Kearney, superintendent of natural gasoline plants in the production department of the Mid-Continent Petroleum Corp. has devised and put into operation a means of determining the extent of line losses to such a positive and satisfactory degree that it is well worth describing. There is no question, after nearly a year of trial, of its effectiveness. The practice of the regular, routine walking of pipe line has been abandoned in one instance, and it can be made the rule where the scheme is employed and intelligently interpreted.



Tell-Tale indicator in operation on line of Mid-Continent Petroleum Corp.

Apparatus Described

The apparatus has been dubbed a Tell-Tale Indicator, and is briefly described as follows: A vertical chamber of convenient material and dimensions, say 15-inch to 20-inch diameter and 12-foot to 20-foot height is erected. It must be tight to perfection, permitting absolutely no leakage of either gas or gasoline. It is located preferably at the high pressure end of a section of line. Connections are made, with proper cut-off valves at its bottom to the gasoline line which it is to safeguard. Connection is made for recording pressure gauge at the extreme top, and, if close accuracy is desired, thermometer wells are tapped into the chamber near top and bottom.

The chamber is carefully calibrated in terms of gallons per inch, and subdivi-

(Continued on Page 139)

Construction and Operation

THE CONSTRUCTION OF A PLANT

Problems and Procedure*

The engineering department plans for a plant specify the exact location of the several integral units as well as the grades. The first task of the construction force is to stake the grade for the engine room and distillation unit and start on the grading with as much equipment as can be accommodated. Simultaneously bunkhouses, office, warehouse and cement shack are built. The bunkhouses are built to the extent necessary, according to whether or not the location is near or far from a community. In many organizations a physician is on hand to examine all men that find employment.

It is paramount to have an office and warehouse of some sort at the very outset. A record of the payroll, purchase orders, plans, etc., must be safely housed to avoid confusion. All tools and incoming and outgoing materials must be checked and accounted for. The overhead for accuracy in these matters is always justified.

Divers construction auxiliary equipment is then provided on location. A temporary water supply for concrete purposes and vessel testing is piped to the property, or a well is drilled if the water supply is to come from that source. Welding generators, preferably large units, are set up out of the way and where natural drainage is provided. It is almost always more satisfactory and safer to pipe the gas through a distributing system than to move portable generators all over the lot. It is also more economical. A shed boxed in on two sides is of considerable utility as a shop. Here considerable welding can be done to better advantage than out in the open. A blacksmith's forge in this shop saves many a trip to the nearest machine shop. One or more portable threading machines effect large economies on a construction job. If electricity is not available, a gas engine driven generator is provided for these units. A saving of several hundred per cent may be realized on pipe cutting and threading over the "strong arm method." Several types and sizes of units of this character are on the market.

*Twelfth of a series of articles explaining the inner workings of a natural gasoline organization. The series was prepared by an operator actively engaged in all phases of construction and operation.

Care in Planning

Good planning will result in getting all of these details lined up at about the time the engine foundation pits have been dug and forms set for the running of concrete. A form will not be made for every engine foundation but two or four forms will be used, according to the size of the plant. Two blocks can be run at a time, thus reducing the number of forms, for they can be used over and over again. Since the detailed pipe and connection work consumes a great deal of time, it is best to run concrete foundations for all of the heavy distillation equipment right along with the engine blocks to get all the heavy concrete work out of the way, on the one hand, and on the other, to pave the way for setting absorbers and distillation units on which piping, etc., may thereupon be rushed toward completion.

Due care must be taken in the handling of heavy equipment, both from the standpoint of possible damage to equipment and to men. The superintendent will satisfy himself that no risks are taken in raising towers, scaffolding, etc. A few accidents in connection with these jobs have often increased the labor expense on a plant 30 per cent. Safety engineering on a construction job is no less important than any other form of engineering.

As the job progresses, the management of the force watches that progress from day to day, shifting the force as necessary, to the end that all of the separate jobs will be completed simultaneously. No good is accomplished if the engine room and auxiliary are completed if the distillation unit is not ready to take the oil. Any number of expediencies may be justified to "crowd" the work, but this expense is to no avail if the whole job is not ready at one time. But no matter how much speed is desired, there should be no sacrifice in workmanship. The superintendency will watch all work, alignments, concrete work, welding, and connection work, to the end that when the time for testing the plant has arrived, there should be no long drawn-out delay in corking and in changing connections, inserting gaskets, and the like, which due care in the first place would have avoided.

A few days before the plant is ready to be tested out, it is always a good plan for the chief chemist or control man from the operating division to inspect the plant. He will see to it that all thermometer wells, gauge connections, etc., are provided; that all flow meters, recorders, and regulators are in place and properly set, so that final adjustments may be made with the least delay when the gas is started through the plant.

Who's Who
IN NATURAL GASOLINE MANUFACTURE

GENERAL PETROLEUM CORP. OF CALIFORNIA

The General Petroleum Corp., one of the largest producers and refiners of crude oil on the West Coast is also a large manufacturer of natural gasoline although at present it is operating only three plants.

With the deep sand development in the Santa Fe Springs last year the corporation greatly increased the production of its plant in the Santa Fe Springs Field. This plant has a rated capacity of 190,000 gallons daily, being one of the two or three largest plants of the natural gasoline industry. The Santa Fe Springs Field has furnished a large supply of casinghead gas with a large heavy gasoline content.

The General's gasoline plant operations are closely tied in with its crude oil production and refinery operations. At Vernon, which is within the Los Angeles Basin area, the corporation has a 50,000-bbl. refinery and a new refinery at Torrance with a capacity of 35,000 bbls. daily. A third refinery is located at Olinda with a capacity of 2,000 bbls. daily.

The natural gasoline operations center at the general headquarters of the corporation located in the Higgins Building, Los Angeles. R. C. Wheeler is manager of the plants.

Following is a list of the corporation's plants:

Field Location—	Daily capacity gallons
Santa Fe Springs	190,000
Ventura	45,000
Signal Hill*	18,000
Alamitos Heights	35,000
Brea*	20,000
Total	308,000

*Temporarily shut down.

SIGNAL HILL INCREASES CALIFORNIA PRODUCTION

The activities of the Signal Hill Gasoline Co. a subsidiary of the Richfield Oil Co., are confined to the construction and operation of natural gasoline plants in California. The company became a major natural gasoline manufacturer when the Richfield company secured controlling interest and merged other natural gasoline properties including those of the Pan American Western Petroleum Corp. At present all the natural gasoline plants of the Richfield company are operated by the Signal Hill company.

The 11 operating plants and one shut down plant of the company are located in several fields of California, the largest production being in the Signal Hill Field. The 12 plants have a capacity of 183,000 gallons daily. The company has the same executive management as the parent Richfield company. H. R. Linhoff is manager of the natural gasoline plants.

The Richfield company, through its five refineries in California, furnish plenty of outlets for the natural gasoline plants. These five refineries have a capacity of 129,000 bbls. daily.

Following is table giving a list of Signal Hill plants, all of which are of the oil absorption type:

Field Location—	Daily capacity gallons
Signal Hill	30,000
Alamitos Heights	15,000
Torrance	2,000
Signal Hill*	15,000
Signal Hill	11,000
Signal Hill	35,000
Elk Hills	5,000
Midway-Sunset	3,000
Rincon	15,000
Huntington Beach	15,000
Seal Beach	35,000
Midway-Sunset	2,000
Total	183,000

*Temporarily shut down.

INSTALL NEW EQUIPMENT

Installation of new equipment in the Arkansas City natural gasoline plant of the Empire Oil & Refining Co. has been completed, and the new plant is now in operation. The operation of the old plant continued, without interruption, during the construction and installation of the new equipment, and production was suspended only one day while tying in the new plant. Work of reclaiming the old plant is to begin at once. The new plant has capacity of 12,000 gallons of natural gasoline daily.

PLANTS IN POTRERO AREA

LOS ANGELES, Calif., May 10.—Two new gasoline plants are assured for the town lot area in Potrero to handle gas coming from the deep sand development.

The Pan California Oil Corp. has been granted a permit to construct a plant of the oil absorption type on Lot 27, Block 1, on Tract 146. A permit has also been issued to the Edington-Witz Refining Co. to construct a plant on Lots 22 and 23, Block 4, of Tract 146. Both plants will be in operation by early summer.

Brief Items for Petroleum Refiners

Phillips Will Start Work Soon on Line From Borger Plant

Surveyors and engineers for the Phillips Pipe Line Co. of Bartlesville, Okla., are now at work completing plans for the laying of a pipe line extending north from its refinery at Borger, Tex. It has been known for some time that the Phillips company was considering the construction of a line from its Panhandle properties where it has large crude oil and natural gasoline production in addition to its refinery.

Various routes have been considered for the line, one of which as previously announced was to St. Louis via Tulsa and Springfield, Mo. It is now understood, however, that the first section of the line will extend north to either Arkansas City or Wichita, Kans. At the latter point last year the company purchased a site for a refinery. The line will be built to transport either crude oil or gasoline.

The project has been financed through the organization of the Phillips Pipe Line Co. with 1,000,000 shares of capital stock. The line will be either 8 or 10-inch and when the entire line is completed will cost between $12,000,000 and $15,000,000.

Those familiar with the Phillips operation point out that the company occupies a strong position for the operation of either a gasoline line or a crude oil line. The company is the largest natural gasoline manufacturer in the Texas Panhandle and also the largest refiner, its plant having a capacity of 15,000 bbls. daily. Its crude oil production exceeds the requirements of the refinery. In so far as the natural gasoline is concerned it would be feasible to transport it to northern points blended either with the crude oil or refinery gasoline.The company for some time has been selling considerable quantities of natural gasoline to the Humble Oil and Refining Co. This natural gasoline mixed with crude oil is transported by pipe line to the Gulf Coast.

New Companies

The Phillips company also announced the organization of two additional subsidiary companies this week. The Phillips Natural Gas Co. will be the vehicle for considerable broadening of Phillips Petroleum Co.'s market for its natural gas and which will carry on certain other activities of Phillips Petroleum Co. in the natural gas industry. The other new company just formed is Phillips Petroleum Utilities Co. which will primarily distribute liquefied petroleum gas and co-ordinate the Phillips Petroleum Co.'s other activities in the utility division.

WILCOX EXPANDS PROPERTIES

The Wilcox Oil & Gas Co. has completed all negotiations for the acquisition of the Pampa Refining Co.'s plant in Pampa, Tex., and took over its operation several days ago. At present it is running 3,800 bbls. of crude daily and the company expects to add cracking units in the near future.

The company's gasoline plant, located 6 miles from the refinery, is being increased in size and a 2-inch line has been purchased from the Atlantic Producing Co., which will connect the gasoline plant and the refinery, thus eliminating a freight charge on the natural gasoline.

The purchase of the Grayco Gasoline Co., with several bulk and service stations in Pampa, was announced previously, and this gives the company a complete operating unit in the Pampa district.

RAILROADS WILL CO-OPERATE WITH REFINERS IN PIPE LINE PROJECTS

Co-operation between railroads and oil companies which have become interested in the construction of pipe lines from the Mid-Continent Field to consuming points in the Middle West for the transportation of gasoline and other refined products is apparently assured as the result of a conference held last week in Tulsa. The conference was attended by officials of Southwestern railroads and some of the larger oil companies with refineries in the Mid-Continent Field.

Although no official announcement was issued it is understood that at the meeting railroad officials agreed with oil company representatives that the construction of pipe lines offers the only feasible plan of reducing transportation charges for companies which have large investments in refineries located in the Mid-Continent and which market the bulk of their refined products in the Middle Western states either through their own stations or through jobbers.

When the plans for pipe line construction became known interested railroads are said to have taken an antagonistic attitude fearing the loss of large revenues due to the pipe line competition. Several conferences were held between railroad and oil company officials previous to the meeting last week. The lowering of rail rates in long distant hauls was considered. This plan is said to have been dropped due to the fact that a substantial reduction in rates would have been necessary to secure an equality with the proposed pipe line rates and this in turn would have resulted in a general rail rate revision case in which refiners and railroads in all parts of the country would have been interested.

With material reductions in rail rates impossible, oil company officials have taken the position that railroads have the choice of co-operating with the Mid-Continent refining industry in the building of pipe lines or seeing many of the larger units moved to the consuming territory in the Middle West. The proposed gasoline lines, it is pointed out, will assure the continuance of plant operation in Oklahoma, Kansas, and other Mid-Continent points and the railroads will continue to have the movement of products which are not transported in pipe lines and in addition will have the business incident to the transportation of equipment and supplies to the refineries.

This view of the matter is now said to have been accepted by the railroads. It had previously been reported that certain railroads would not permit the gasoline pipe lines to cross their tracks. While the pipe line companies operating in Texas, Oklahoma, Kansas and Missouri have the right of eminent domain in crossing the property of the railroads, the same right does not exist in some of the other states.

ACTING SECRETARY OF SHELL-UNION OIL CORP.

Effective May 15, Stanley W. Duhig, formerly head of the auditing department of the Shell Oil Co. at San Francisco, became acting secretary of the

Stanley W. Duhig

Shell-Union Oil Corp. with offices in New York.

Mr. Duhig is well known in California oil circles, and has been associated with the Shell Oil Co. since 1914. He spent 11 years in the Coalinga oil fields, was office manager of the Shell Oil Co. in Long Beach, and was later promoted to auditor of production in the Los Angeles office. For several years before he became associated with the San Francisco office his activities as head of the sales department accounting work covered all of southern California and Arizona.

GULF WILL REPLACE ITS BURNED EQUIPMENT

Fire which is said to have originated from a small tanker at the company's dock spread to the Bayonne, N. J., refinery of the Gulf Refining Co. Thursday, May 8, resulting in loss totaling approximately $2,000,000. The loss was largely confined to tanks and various grades of crude oil and refined products. None of the employes was seriously injured.

The Bayonne refinery was built about three years ago. Located on a 13-acre tract formerly used as a bulk terminal, the plant has a rated capacity of 40,000 bbls. daily. The burned equipment will be replaced immediately.

TIDE WATER REFINERY SCHOOL

NEW YORK, May 12.—The Tide Water Oil Co.'s refinery school at its Bayonne plant has just closed its sessions for the 1929-30 term, with the graduation of 28 men who have completed the two-year course.

In the process course, both first and second year, much has been explained that has been new to most of the students. A great deal of new equipment has been added and new methods of refining are being introduced almost daily. It has been the aim of the instructors, the company states, to bring home to the student how the new equipment is constructed and operated and why it is so operated.

The Steam and Power Plant Engineering Course was held at the Barrel Factory boiler house, the students receiving practical demonstrations in the operation of the pumps. This is a practical course and has enabled a number of the students to take examinations for, and receive, licenses as operators and engineers.

The technical course, relating to the construction of distilling equipment, was attended by a number of men from the research and engineering departments

THOMAS AND DELBRIDGE COMMITTEES' CHAIRMEN

Henry Thomas, Sun Oil Co., Philadelphia, Pa., is chairman of the Committee on Standardization of Refinery Equipment of the Division of Refining, American Petroleum Institute, appointment of which was announced recently. T. G. Delbridge, Atlantic Refining Co., Philadelphia, is chairman of the Refining Division's Committee on Program for the annual meeting. R. P. Anderson of the institute staff is secretary of both committees.

Members are: Committee on Standardization: Mark W. Daw, Shell Oil Co., San Francisco, Calif.; C. H. Haupt, Standard Oil Development Co., Elizabeth, N. J.; K. V. King, Standard Oil Co. of California, San Francisco, Calif.; W. D. Kinsell, Pure Oil Co., Chicago, Ill.; F. P. Risdon, The Texas Company, New York, and Walter Samans, Atlantic Refining Co., Philadelphia, Pa.

Committee on Program: H. W. Camp, Empire Oil & Refining Co., Tulsa; R. A. Halloran, Standard Oil Co. of California, San Francisco, Calif.; R. E. Haylett, Union Oil Co. of California, Los Angeles, Calif.; E. W. Isom, Sinclair Refining Co., New York; N. E. Loomis, Standard Oil Development Co., Elizabeth, N. J.; K. G. Mackenzie, The Texas Company, New York; Walter Miller, Continental Oil Co., Ponca City, Okla.; R. E. Wilson, Standard Oil Co. of Indiana, Whiting, Ind.

ATLANTIC IN CONTRACT FOR DE FLOREZ UNITS

The Atlantic Refining Co. has closed contracts for the construction of four deFlorez cracking units at its Point Breeze (Philadelphia) refinery. These units, operating with residual oils, will have sufficient capacity to produce 4,000 bbls. of gasoline daily. The construction cost will be approximately $2,000,000. The units will be built by the M. W. Kellogg Co.

The Atlantic installation will be the first of the deFlorez stills to be installed outside the refineries of The Texas Company, at whose refineries the process was developed. The process can be operated on residual oils as well as ordinary charging stock to produce either ordinary gasolines or high antiknock motor fuel.

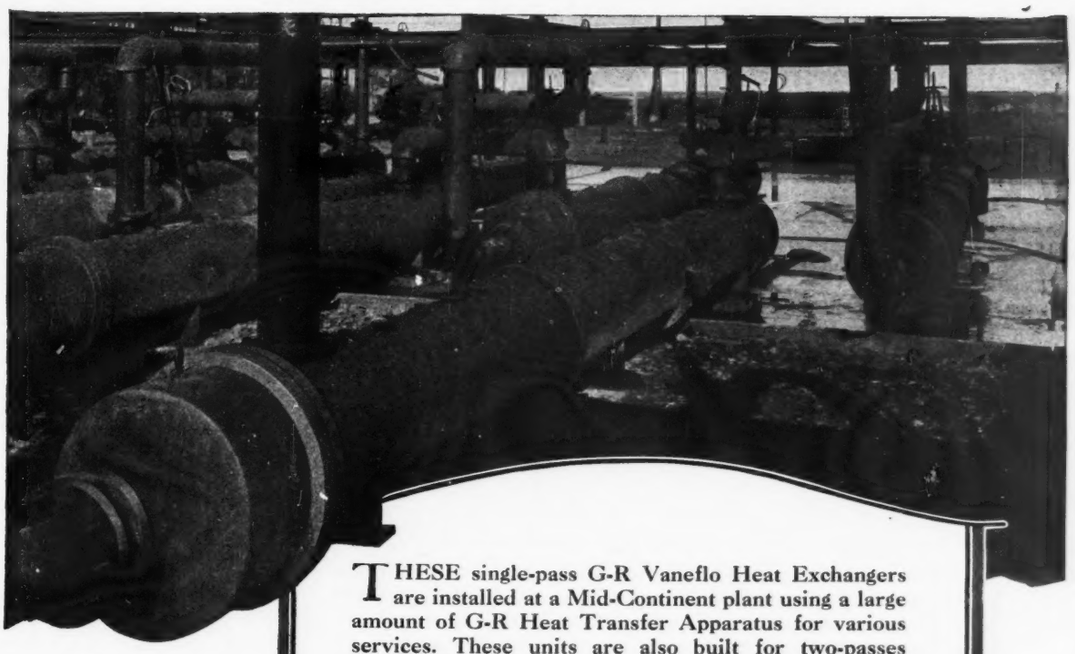
The first commercial unit was constructed in 1927 and has been operating on Venezuela crude for the past two years. It has been operated with heavy charging stock under vapor-phase conditions to produce antiknock distillate with continuous periods of 1,000 to 2,000 hours without the usual cleaning. The Texas Company at its refineries has units under construction which will have a capacity of 5,000 bbls. of gasoline daily.

REFINERY VISIT

The manufacturing department of the National Petroleum Association will be the guests of the Pennzoil Co. of Oil City, Pa., on Saturday, May 24. A general invitation to the membership of the association to visit the Pennzoil refinery located at Rouseville near Oil City has been extended. The refinery, which is the largest of the oil industry operated with Pennsylvania grade crude oil, has recently been enlarged and improved in several departments.

UNION KEROSENE PLANT

The Union Oil Co. of California has started the construction of a large plant for treating kerosene refined from California crude oils. The treating plant will cost approximately $750,000.



THESE single-pass G-R Vaneflo Heat Exchangers are installed at a Mid-Continent plant using a large amount of G-R Heat Transfer Apparatus for various services. These units are also built for two-passes through the shell and with two or more passes through the tubes. This flexibility of design and their many additional special features make them adapted for a wide range of services. They have been found highly efficient on handling residuum, mineral seal oil, gasoline and other distillates, crude, and casinghead or natural gas, both for cooling and heat exchange.

The Vaneflo Heat Exchanger is one of the many types of G-R Heat Transfer Apparatus which have received wide approval from refinery and natural gasoline plant engineers and superintendents. Whatever your condensing, cooling, heating or heat exchange requirements may be, they can be efficiently and dependably served by an exactly suitable G-R unit. The various types of G-R Heat Transfer Apparatus are described in bulletins which will be sent on request.

The Griscom-Russell Co., 285 Madison Ave., N. Y.

Philadelphia	Cleveland	Kansas City	San Francisco
Boston	Massillon	Charlotte	Los Angeles
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Shell-and-Tube, Atmospheric, and Condenser Box Types
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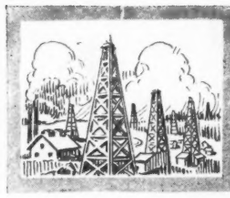
LEVEL CONTROLLERS

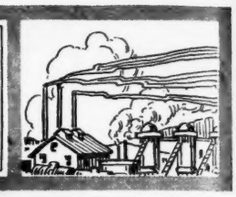
Griscom-Russell

Heat Transfer Apparatus



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.



GASOLINE AND NAPHTHA

	May 13		May 6		Apr. 29	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.06¾	.07¼	.07	.07¼	.07	.07¼
56-58 450 endpoint	.06¾	.07¼	.07	.07¼	.07	.07¼
*58-60 437 endpoint (U. S. Motor)	.075		.075		†.07	.07½
*60-62 437 endpoint	†.07¼	.07½	†.07¼	.07½	.075	
*60-62 400 endpoint	†.07¾		.0755		†.07½	.08
*64-66 375 endpoint	.0812		.0812		.0812	
68-70 360 endpoint	.08	.08¼	.08¼	.08½	.08¼	.08½
64-66 437 endpoint (blend)	.06¾	.07	.06¾	.07	.06¾	.07
NORTH TEXAS—						
56-58 450 endpoint	.06½	.07	.06¾	.07	.06¾	.07
58-60 450 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
58-60 437 endpoint (U. S. Motor)	.06¾	.07¼	.07	.07¼	.07	.07¼
60-62 400 endpoint	.07⅛	.07½	.07¼	.07½	.07¼	.07½
64-66 390 endpoint	.07⅜	.07⅝	.07½	.07⅝	.07½	.07⅝
64-66 375 endpoint	.07½	.07¾	.07⅝	.07⅞	.07⅝	.07⅞
68-70 360 endpoint	.07⅜	.08	.08	.08¼	.08	.08¼
64-66 437 endpoint (blend)	.06½	.06¾	.06½	.06¾	.06½	.06¾
***NORTH LOUISIANA—**						
58-60 437 endpoint (U. S. Motor)	.07¾		.07¾		.07¾	
***ARKANSAS—**						
58-60 437 endpoint (U. S. Motor)	.07¾		.07¾		.07¾	
PENNSYLVANIA—						
52-54 Naphtha	.07¾	.08	.07½	.07¾	.07½	.07¾
54-56 Naphtha	.07¾	.09	.07¾	.08	.07¾	.08
58-60 Gasoline	.08¼	.08½	.08	.08¼	.08	.08¼
60 Gasoline	.08¼	.08½	.08¼	.08½	.08¼	.08½
62 Gasoline	.08½	.08¾	.08½	.08¾	.08½	.08¾
64 Gasoline	.09	.09¼	.08¾	.09	.08¾	.09
68-70 350 endpoint gasoline	.09¼	.09½	.09	.09¼	.09	.09¼
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.07	.07½	.07	.07½	.07	.07½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.07	.07¼	.07	.07¼	.07	.07¼
56-58 450 endpoint	.07	.07¼	.07	.07¼	.07	.07¼
58-60 437 endpoint (U. S. Motor)	.07	.07½	.07⅛	.07½	.07⅛	.07½
60-62 400 endpoint	.07⅜	.07⅝	.07½	.07⅝	.07½	.07⅝
64-66 375 endpoint	.07⅞	.08	.07¾	.08	.07¾	.08
68-70 360 endpoint	.08	.08¼	.08	.08¼	.08	.08¼
64-66 437 endpoint (blend)	.07¼	.07½	.07¼	.07½	.07¼	.07½
GULF COAST (Export)—						
58-60 (U. S. Motor)	.08		.08		.08	
60-62 400 endpoint	.09		.09		.09	
61-63 390 endpoint	.09¼		.09¼		.09¼	
64-66 375 endpoint	.09½		.09½		.09½	

*Weighted average prices May 12, 5 and April 28 as reported by representative refiners. Sales to jobbers only. †No sales reported. Prices show general market.

*Louisiana, Arkansas, Mississippi and East Texas delivery.

NATURAL GASOLINE

	May 13		May 6		Apr. 29	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06½		.06½	.06⅝	.06½	.06⅝
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06½		.06½		.06½	
Grade B, 76-83.9, 375 e.p., rec. 85%	.06⅜	.06½	.06½		.06½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06¼	.06½	.06½		.06½	
Grade C, 80-92, 375 e.p., rec. 78%	.06¼	.06½	.06½		.06½	
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06½		.06½		.06½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06½		.06½		.06½	
Grade B, 76-83.9, 375 e.p., rec. 85%	.06¼	.06½	.06½		.06½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06¼	.06½	.06½		.06½	
Grade C, 80-92, 375 e.p., rec. 78%	.06¼	.06½	.06½		.06⅜	.06½
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06½	.06¾	.06½	.06¾	.06½	.06¾
Grade BB, 84-92, 375 e.p., rec. 85%	.06¼	.06½	.06½	.06¾	.06½	.06¾
Grade C, 80-92, 375 e.p., rec. 78%	.06¼	.06½	.06½		.06½	
CALIFORNIA—						
75-78 375-390 endpoint	.06¾	.07¾	.06¾	.07¾	.06¾	.07¾
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.06½		.06½		.06½	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.06½		.06½		.06½	
Grade B, 76-83.9, 375 e.p., rec. 85%	.06½		.06½		.06½	
Grade BB, 84-92, 375 e.p., rec. 85%	.06⅜	.06½	.06½		.06½	
Grade C, 80-92, 375 e.p., rec. 78%	.06⅜	.06½	.06½		.06½	

BURNING OIL

	May 13		May 6		Apr. 29	
OKLAHOMA (Group 3)—						
41-43 water white kerosene	.04½	.04½	.04¼	.04½	.04¼	.04½
42-44 water white kerosene	.04⅜	.04¾	.04½	.04¾	.04½	.04¾
NORTH TEXAS—						
41-43 water white kerosene	.04	.04⅛	.04⅛	.04¼	.04⅛	.04¼
40-42 water white kerosene	.04		.04	.04⅛	.04⅛	
***NORTH LOUISIANA—**						
41-43 water white kerosene	.05	.05¼	.05	.05¼	.05¼	.05⅜
***ARKANSAS—**						
41-43 water white kerosene	.05	.05⅛	.05	.05⅛	.05¼	.05⅜
PENNSYLVANIA—						
43 Kerosene prime white	.05¼	.05½	.05¼		.05½	
45 Kerosene water white	.05½	.05¾	.05½		.05¾	
46 Kerosene water white	.05¾	.06	.05¾	.06	.06	.06¼
47 Kerosene water white	.06	.06¼	.06¼	.06½	.06¼	.06½
300 Mineral Seal	.06½	.06¾	.07		.07	
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.04	.04½	.04	.04½	.04	.04½
Engine distillate, 43-44, 445 endpoint	.06	.06½	.06	.06½	.06	.06½
Engine distillate, 42-44, 480 endpoint	.05	.05½	.05	.05½	.05	.05½
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white kerosene	.04¼	.04½	.04⅜	.04½	.04⅜	.04⅝
42-44 water white kerosene	.04½	.05	.04½	.05	.04⅝	.05
GULF COAST (Export)—						
41-43 prime white	.06		.06		.06	
41-43 water white	.07		.07		.07	

*Louisiana, Arkansas, Mississippi and East Texas delivery.

FUEL OIL

	May 13		May 6		Apr. 29	
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil, per bbl.	.52½	.60	.55	.60	.55	.60
18-22 Fuel Oil, per bbl.	.55	.60	.57½	.62½	.57½	.62½
20-22 Fuel Oil, per bbl.	.60	.65	.62½	.67½	.62½	.67½
22-26 Fuel Oil, per bbl.	.65	.70	.65	.70	.65	.70
24-26 Fuel Oil, per bbl.	.70	.80	.70	.80	.70	.80
26-30 Fuel Oil, per bbl.	.80	.85	.80	.85	.80	.85
28-30 Fuel Oil, per bbl.	.85	.95	.85	.95	.85	.95
32-36 Gas Oil (industrial)	.02¼	.02⅜	.02¼	.02½	.02⅜	.02½
32-36 Gas Oil (straw color)	.02⅜	.02⅝	.02⅜	.02⅝	.02½	.02⅝
36-38 Distillate	.02¾	.03	.02¾	.03	.02¾	.03
38-40 Straw Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
NORTH TEXAS—						
Below 20 Fuel Oil, per bbl.	.50	.55	.50	.55	.50	.55
24-26 Fuel Oil, per bbl.	.65	.70	.67½	.75	.67½	.75
32-36 Gas Oil (industrial)	.02⅛	.02⅜	.02¼	.02⅜	.02¼	.02⅜
38-40 Straw Distillate	.02¾	.03	.02¾	.03	.02¾	.03
***NORTH LOUISIANA—**						
18-20 Fuel Oil, per bbl.	.80	.90	.80	.90	.80	.90
30-32 Gas Oil	.02¾	.03	.02⅝	.02¾	.02¾	.03
***ARKANSAS—**						
33-36 Distillate	.02⅞	.03⅛	.02¾	.03	.02¾	.03
30-32 Gas Oil	.02¾	.02⅞	.02¾		.02¾	
16-22 Refinery Fuel Oil, per bbl.	.80	.90	.80	.90	.75	.85
GULF COAST (South Texas)—						
Gas Oil	.03¾	.04	.04		.04	
Bunker C Fuel (cargo lots), per bbl.	.75	.80	.80	.85	.75	.80
Bunker C Fuel (small lots)	1.05	1.10	1.05	1.10	1.05	1.10
PENNSYLVANIA—						
30-34 Fuel Oil	.04⅛		.04		.04¼	
36-40 Fuel Oil	.04¼		.04¼		.04¼	.04⅜
CALIFORNIA—						
33-36 Distillate	.02½	.03	.02½	.03	.02½	.03
26-32 Distillate	.01¾	.02	.01¾	.02	.01¾	.02
15-20 Fuel Oil, Bunker (at tidewater)	.60	.65	.60	.65	.60	.65
15-20 Fuel Oil (cargo lots), per bbl.	.55	.65	.55	.65	.55	.65
27 plus Diesel, per bbl.	.80	.90	.80	.90	.80	.90
CHICAGO DISTRICT (Based on Group 3)—						
22-26 Fuel Oil, per bbl.	.70	.75	.70	.75	.70	.75
18-22 Fuel Oil, per bbl.	.57½	.62½	.57½	.62½	.55	.60
28-30 Fuel Oil, per bbl. (zero)	.90	.95	.90	.92½	.90	.95
32-36 Gas Oil (zero)	.02½	.02¾	.02½	.02¾	.02½	.02⅝
32-36 Gas Oil (industrial)	.02⅜	.02½	.02⅜	.02½	.02½	
36-38 Distillate	.02½	.02¾	.02½	.02¾	.02¾	.02¾
38-40 Straw Distillate	.02¾	.03	.02¾	.03	.02¾	.03

*Louisiana, Arkansas, Mississippi and East Texas delivery.

LUBRICATING OIL AND WAX

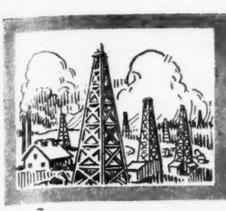
	May 13		May 6		Apr. 29	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06	.07	.06	.07	.06	.07
100 vis., 3 color, 20-25 cold test	.05½	.06	.05½	.06	.05½	.06
150 vis., 3 color, 20-25 cold test	.08½	.09	.08½	.09	.08½	.09
150 vis., 4 color, 20-25 cold test	.08	.08½	.08	.08½	.08	.08½
180 vis., 3 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
180 vis., 4 color, 23-28 cold test	.09½	.10	.09½	.10	.09½	.10
180 vis., 5 color, 23-28 cold test	.09	.09½	.09	.09½	.09	.09½
200 vis., 3 color, 23-28 cold test	.11½	.12	.11½	.12	.11½	.12
200 vis., 4 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11½
200 vis., 5 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
240 vis., 3 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
240 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
240 vis., 5 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
280 vis., 3 color, 25-30 cold test	.17½	.18	.17½	.18	.17½	.18
280 vis., 4 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
280 vis., 5 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
Cylinder Stocks:						
600, steam refined, light green	.09	.11	.09	.11	.09	.11
600, steam refined, dark green	.08	.10	.08	10	.08	.10
190-200 vis., D color Bright Stock	.41	.42	.41	.42	.41	.42
150-160 vis., D color Bright Stock	.37		.37		.37	
*150-160 vis., D color Bright Stock	.35	.36½	.35	.36½	.35	.36½
150-160 vis., E color Bright Stock	.32	.35	.32	.35	.32	.35
Waxes:						
124-126 White Crude Scale Wax	.02⅛	.02⅜	.02⅛	.02⅜	.02¼	.02½

*High cold test. All bright stock prices are for domestic movement.

PENNSYLVANIA—						
24 Neutral	.07	.07¼	.06¾	.07	.06¾	.07
34 Sundebloom	.07¾		.07¾		.07¾	
36 Miners' Neutral	.07½		.07½		.07½	
150, 3 color	.15½	.16½	.15½	.16½	.15	.16
180, 3 color	.21	.22	.21	.22	.21	.22
200, 3 color	.25	.26	.25	.26	.25	.26
220, 3 color	.29	.30	.27	.28	.27	.28
600, steam refined	.22½	.23	.23	.23½	.23	.24
635, steam refined	.29	.29½	.26	.27	.26	.27
650, steam refined	.29½	.30	.29½	.30	.29½	.30
600, Pennsylvania Flash	.31	.32	.31	.32	.31	.32
630, Pennsylvania Flash	.35	.36	.35	.36	.35	.36
600, E filtered	.28½	.30	.28½	.30	.28½	.30
600, D filtered	.35	.35½	.34½	.35	.34½	.35
Pennsylvania Bright Stocks	.39	.40	.39	.40	.39½	.41
*122-124 Write Crude Scale Wax	.02½	.02⅝	.02⅝	.02¾	.02⅝	.02¾
124-126 White Crude Scale Wax	.02⅝	.02¾	.02¾		.02¾	

*At New York.

GULF COAST (South Texas)—						
100 vis., 2-2½ color, pale oil	.06½	.06¾	.06½	.06¾	.06½	.06¾
200 vis., 3 color, pale oil	.09½		.09½		.09½	
300 vis., 3 color, pale oil	.10¾		.10¾		.10¾	
500 vis., 3½ color, pale oil	.12	.12¾	.12	.12¾	.12	.12¾
750 vis., 3½ color, pale oil	.13½		.13½		.13½	
1,200 vis., 3½ color, pale oil	.16		.16		.16	
2,000 vis., 4 color, pale oil	.17		.17		.17	
200 vis., 5-6 color, red oil	.08¾	.09	.08¾	.09	.08¾	.09
300 vis., 5-6 color, red oil	.10	.10¼	.10	.10¼	.10	.10¼



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement unless otherwise noted.

500 vis., 5-6 color, red oil	.11¼		.11¼		.11¼					
750 vis., 5-6 color, red oil	.12¾	.13	.12¾	.13	.12¾	.13				
1,200 vis., 5-6 color, red oil	.15		.15		.15					
2,000 vis., 6 plus color, red oil	.17		.17		.17					
200 vis., 2½ color, filtered oil	.11	.12	.11	.12	.11	.12				
300 vis., 2½ color, filtered oil	.12	.13	.12	.13	.12	.13				
500 vis., 2½ color, filtered oil	.14½	.15	.14½	.15	.14½	.15				
750 vis., 2½-3 color, filtered oil	.17	.19	.17	.19	.17	.19				
CALIFORNIA—										
130 vis., 2½-3 color	.10¼	.10½	.10¼	.10½	.10¼	.10½				
200 vis., 2½-3 color	.11½	.11¾	.11½	.11¾	.11½	.11¾				
300 vis., 3-3½ color	.13	.13½	.13	.13½	.13	.13½				
350 vis., 3½-4 color	.13½	.13¾	.13½	.13¾	.13½	.13¾				
400 vis., 3½-4 color	.15	.15½	.15	.15½	.15	.15½				
Red Neutral:										
200 vis., 4½-5 color	.11	.11¼	.11	.11¼	.11	.11¼				
300 vis., 5-6 color	.12	.12¼	.12	.12¼	.12	.12¼				
400 vis., 5-6 color	.13¼	.14	.13¼	.14	.13¼	.14				
500 vis., 4½-5 color	.15¼	.15½	.15¼	.15½	.15¼	.15½				
500 vis., 5-6½ color	.15	.15¼	.15	.15¼	.15	.15¼				
600 vis., 6½ plus color	.16	.16¼	.16	.16¼	.16	.16¼				

Note—Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	May 13		May 6		Apr. 29	
Gasoline, U. S. Motor, 58-60, 437 e.p.	.09	.10	.08½	.09¾	.08½	.09¾
Kerosene, water white, 41-43	.07¼	.07¾	.07¼	.07¾	.07¼	.07¾
*Fuel Oil, Bunker "C," 14-16, per bbl.	1.15		1.15		1.15	
Fuel Oil, Diesel, 28-30, per bbl.	2.00		2.00		2.00	
Gas Oil, 32-36 gravity	.04¾	.05¼	.04¾	.05¼	.04¾	.05¼
25 pale Paraffin Oil	.10½		.10½		.10½	
28 pale Paraffin Oil	.07¼		.07¼		.07¼	
285 red Paraffin Oil	.12½		.12½		.12½	
250 red Paraffin Oil	.11½		.11½		.11½	
225 red Paraffin Oil	.10		.10		.10	
200 red Paraffin Oil	.09¼		.09¼		.09¼	
Refined Wax:						
120-122 a.m.p., per lb.	.03½		.03½		.03½	
125-127 a.m.p., per lb.	.03¾		.03¾		.03¾	
130-132 a.m.p., per lb.	.04⅜		.04⅜		.04⅜	
133-135 a.m.p., per lb.	.05¼		.05¼		.05¼	
135-137 a.m.p., per lb.	.05½		.05½		.05½	
Petrolatum in barrels, in carload lots, per pound:						
Dark Green	.01⅞		.01⅞		.01⅞	
Amber	.03⅜		.03⅜		.03⅜	
Extra Amber	.03½		.03½		.03½	
Cream	.06⅜		.06⅜		.06⅜	
Lily White	.06½		.06½		.06½	
Snow White	.08⅜		.08⅜		.08⅜	

*Lighterage 5.0 cents a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	May 13	May 6	Apr. 29
Kerosene, prime white	.07¾	.07¾	.07¾
Kerosene, water white	.09	.09	.09
600, steam refined cylinder stocks, in bbls.	.31½	.31½	.31½
635, steam refined	.33½	.33½	.33½
650, steam refined	.37½	.37½	.37½
600, Pennsylvania Flash	.39	.39	.39
630, Pennsylvania Flash	.42	.42	.42
600, Warren E	.38½	.38½	.38½
600, Oil City E	.37½	.37½	.37½
Light 140-150 Bright Stocks	.48	.48	.48
Dark 140-150 Bright Stocks	.46	.46	.47

LOS ANGELES EXPORT PRICES

	May 13		May 6		Apr. 29	
Kerosene, water white	.03¾	.04¼	.03¾	.04¼	.03¾	.04¼
*U. S. Motor Gasoline, 53-55, 437 e.p.	.06½	.06¾	.06½	.06¾	.06½	.06¾

*Prices on coastwise shipments.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

Oklahoma City—Same as other Mid-Continent price schedule except Empire Pipe Line Co. posted all oil 40 gravity and above at $1.43 on April 10.

Corsicana heavy (April 10, 1930).....$ .80

Other fields .....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties—See gravity table.

In Noel-McConnell district Prairie Oil & Gas Co. posted April 10, below 30 degrees, 7½ cents, with 5-cent differential upward to 34-34.9, $1.00½ and then a 3-cent differential upward to 44 and above at $1.35½.

WEST TEXAS

Iatan* .....Same as North Texas

Crane-Upton-Crockett, Pecos, Winkler Mitchell and Ector .....

.....See gravity table, Column 3

Howard and Glasscock .....

.....See gravity table, Column 9

Chalk† (April 10, 1930) .....$ .75

*Includes Westbrook Field. †Posted by Humble Oil & Refining Co.

ARKANSAS-NORTH LOUISIANA

Smackover, below 24 gravity (April 11, 1930) .....$ .90

Smackover, 24 gravity and above (April 11, 1930) 1.05

Carterville, Sarepta and Cotton Valley, below 36 gravity (April 11, 1930)... .85

Bellevue (April 11, 1930) 1.15

Urania (April 11, 1930) ..... .95

East El Dorado (April 11, 1930) ..... .90

Other fields .....See gravity table

Cotton Valley crude about 36 gravity takes same gravity price schedule as shown for North Louisiana and Arkansas crude in Mid-Continent gravity price table.

Note—Smackover, Cotton Valley and Bellevue posted by Standard Oil Co. of Louisiana and Magnolia Petroleum Co.; Urania posted by Louisiana Oil Refining Corp.; East El Dorado posted by Magnolia Petroleum Co.

GULF COAST

Grade A (April 10, 1930)* $1.10

Grade B, 25 degrees and upward .....

.....See gravity table

Jennings, La. (April 10, 1930)† 1.10

Refugio (light) .....Same as Grade B

Refugio (heavy) (April 10, 1930)‖ .... .85

Sorrento (April 10, 1930)‡ 1.10

Markham (April 10, 1930)§ ..... .85

High Island (April 10, 1930)¶ ..... .95

*Humble Oil & Refining Co. †Gulf Pipe Line Co. ‡Sun Pipe Line Co. §The Texas Pipe Line Co. ¶Posted by Gulf Pipe Line Co. ‖Humble Oil & Refining Co. and Gulf Coast Pipe Line Co.

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.
(Effective April 11, 1930)

Iles (Feb. 15, 1930):

33-gravity and above .....$ .87

(Continued on Page 134)

CRUDE OIL GRAVITY TABLE

Gravity—	1 Okla.-Kans.	2 N. C. Texas, No. La., Arkansas (Crane, Upton, Ector, Crockett, Winkler, Pecos, Mitchell (West Texas); Lea, N. Mex.	3	4 Wheeler County (Texas Panhandle)	5 Gray County (Texas Panhandle)	6 Carson and Hutchinson (Texas Panhandle)	7 Salt Creek, Wyo.	8 Stephens, Ark.	9 Howard-Glasscock (West Texas)	10 Grade B Gulf Coast and Refugio, Texas
Below 25	.75	.72	.65	.....	.....	.....	.....	.....	.65	1.00
25 to 25.9	.80	.77	.68	.....	.....	.....	.....	.....	.68	1.03
26 to 26.9	.85	.82	.71	.....	.....	.....	.....	.....	.71	1.06
27 to 27.9	.90	.87	.74	.....	.....	.....	.....	.76	.74	1.09
28 to 28.9	.95	.92	.77	.....	.75½	.....	.....	.81	.76	1.12
29 to 29.9	1.00	.97	.80	.75½	.80½	.....	1.00	.86	.78	1.15
30 to 30.9	1.05	1.02	.83	.80½	.85½	.....	1.05	.91	.80	1.18
31 to 31.9	1.10	1.07	.86	.85½	.90½	.77½	1.10	.96	.82	1.21
32 to 32.9	1.15	1.12	.89	.90½	.95½	.82½	1.15	1.01	.84	1.24
33 to 33.9	1.18½	1.17	.92	.95½	1.00½	.87½	1.18½	.....	.86	1.27
34 to 34.9	1.22	1.22	.95	1.00½	1.05½	.92½	1.22	.....	.88	1.30
35 to 35.9	1.25½	1.25½	.98	1.04	1.09	.96	1.25½	.....	.90	1.33
36 to 36.9	1.29	1.29	1.01	1.07½	1.12½	.99½	1.29	.....	.92	1.36
37 to 37.9	1.32½	1.32½	..	1.11	1.16	1.03	1.32½	.....	.....	1.39
38 to 38.9	1.36	1.36	..	1.14½	1.19½	1.06½	.....	.....	.....	1.42
39 to 39.9	1.39½	1.39½	..	1.18	1.23	1.10	.....	.....	.....	1.44
40 to 40.9	1.43	1.43	..	1.21½	1.26½	1.13½	.....	.....	.....	1.46
41 to 41.9	1.46½	1.46½	..	1.25	1.30	1.17	.....	.....	.....	1.48
42 to 42.9	1.50	1.50	..	1.28½	1.33½	1.20½	.....	.....	.....	1.50
43 to 43.9	1.53½	1.53½	..	1.32	1.37	1.24	.....	.....	.....	1.52
44 and above	1.57	1.57	..	1.35½	1.40½	1.27½	.....	.....	.....	1.54

Column 1, Note—Above prices posted April 10, 1930, by Carter Oil Co. (beginning at 25 degrees and below), and by the Prairie Oil & Gas Co. and other purchasers beginning at 24 degrees and below, the Magnolia Petroleum alone excepted. The Magnolia on April 10 posted the following prices: Below 26 gravity, 70 cents; 26-26.9, 76 cents; 27-27.9, 82 cents; 28-28.9, 88 cents; 29-29.9, 95 cents; 30-30.9, $1.02. From 31 up to and including 44 degrees and above Magnolia followed Carter price schedule, but made its whole schedule apply to its gravity purchases in Kansas, Oklahoma and North Central Texas alike.

Column 2—Humble Oil & Refining Co. posted above prices April 10, 1930, and was followed by all other companies in Texas except Magnolia which posted a different price schedule than Humble up to 33.9 degrees (see note in paragraph just above). The Texas Company posted North Louisiana and Arkansas on April 10, and Standard of Louisiana posted on April 11 followed by other companies, but Magnolia's price schedule begins with below 28 gravity at 87 cents. North Central Texas includes North Texas, Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Nocona, Moran, and Corsicana light; Arkansas and Louisiana pools include Caddo, Bull Bayou, Crichton, Cotton Valley, above 36 gravity, DeSoto, Haynesville, Homer, El Dorado, and Rainbow.

Column 3—Posted by Humble Oil & Refining Co. April 10, 1930, and Magnolia Petroleum Co. April 10, 1930.

Columns 4, 5 and 6—Humble Oil & Refining Co., Prairie Oil & Gas Co., Magnolia Petroleum Co., April 10, 1930.

Column 7—Mid-West Refining Co., April 11. All crude over 37 gravity $1.32½.

Column 8—Louisiana Oil & Refining Co., April 11.

Column 10—Humble Oil & Refining Co., April 10. Magnolia Petroleum Co. posted below 25 gravity 65 cents with 3-cent differential upward to and including 36 and above, which was posted at $1.01.

CALIFORNIA CRUDE OIL PRICES

Standard Oil Co.-Union Oil Co. (Effective March 11, 1930)

Gravity—	1 Seal Beach, Salt Lake, Newport, Summerland, Long Beach, Richfield, Fullerton, Torrance, Olinda-Brea, Alamitos Heights, Huntington Beach, Signal Hill, Inglewood	2 Whittier, La Habra, Coyote Hills	3 Midway-Sunset, Elk Hills, Lost Hills, Belridge, Buena Vista Hills	4 Montebello	5 Santa Fe Springs (Nov. 8)	6 Santa Maria, Coalinga	7 Wheeler Ridge, Fruitvale	8 Orcutt, Ventura, Rincon	9 Ventura Avenue (Nov. 8)	10 Elwood Terrace	11 Athens, Rosecrans, Dominguez
14 to 14.9	.70	.70	.55	.70	.....	.55	.55	.55	.70	.....	.....
15 to 15.9	.70	.70	.55	.70	.....	.55	.55	.55	.70	.....	.....
16 to 16.9	.70	.70	.55	.70	.....	.55	.55	.55	.70	.....	.....
17 to 17.9	.70	.70	.55	.70	.....	.55	.55	.55	.70	.....	.....
18 to 18.9	.76	.76	.62	.71	.....	.62	.62	.65	.76	.....	.....
19 to 19.9	.82	.82	.70	.77	.....	.70	.70	.70	.82	.....	.....
20 to 20.9	.88	.87	.78	.83	.....	.78	.78	.78	.88	.....	.....
21 to 21.9	.94	.93	.86	.90	.92	.86	.86	.90	.91	.....	.....
22 to 22.9	1.00	.98	.94	.97	.95	.94	.94	.95	.94	.....	.....
23 to 23.9	1.07	.....	1.02	1.05	1.01	1.02	1.02	1.02	1.00	.....	.....
24 to 24.9	1.14	.....	1.09	1.11	1.07	1.07	1.07	1.10	1.07	.....	1.14
25 to 25.9	1.21	.....	1.16	1.17	1.13	1.12	1.12	1.18	1.14	.....	1.19
26 to 26.9	1.28	.....	1.23	1.23	1.19	1.17	1.17	1.26	1.21	.....	1.24
27 to 27.9	1.35	.....	1.30	1.29	1.25	1.23	1.22	.....	1.28	.....	1.29
28 to 28.9	1.42	.....	1.35	1.35	1.31	1.27	.....	.....	1.35	.....	1.34
29 to 29.9	1.46	.....	1.41	1.38	1.37	1.31	.....	.....	1.39	.....	1.39
30 to 30.9	1.50	.....	1.47	1.41	1.43	1.35	.....	.....	1.42	.....	1.45
31 to 31.9	1.55	.....	1.53	.....	1.49	1.39	.....	.....	1.48	.....	1.51
32 to 32.9	1.60	.....	1.59	.....	1.55	1.43	.....	.....	1.53	.....	1.57
33 to 33.9	1.65	.....	1.65	.....	1.60	1.47	.....	.....	1.59	.....	1.64
34 to 34.9	1.70	.....	.....	.....	1.65	1.51	.....	.....	1.65	1.32	1.71
35 to 35.9	1.75	.....	.....	.....	1.70	1.55	.....	.....	1.71	1.39	1.78
36 to 36.9	1.80	.....	.....	.....	1.75	.....	.....	.....	.....	1.46	1.84
37 to 37.9	1.85	.....	.....	.....	1.80	.....	.....	.....	.....	1.53	1.90
38 to 38.9	1.90	.....	.....	.....	1.85	.....	.....	.....	.....	1.60	1.96
39 to 39.9	.....	.....	.....	.....	1.90	.....	.....	.....	.....	1.66	2.02
40 to 40.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.72	2.08
41 to 41.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.78	2.14
42 to 42.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.84	2.20

Kern River, Newhall-McKittrick, Mount Poso and Round Mountain 11 to 13.9 gravity, 50 cents; 14 gravity and above, 55 cents, effective March 11. On March 11, the Union Co. posted Midway-Sunset, Elk Hills, Buena Vista, Lost Hills and Coalinga crude as follows: 11 to 13.9 gravity at 50 cents.

Column 1—Signal Hill, Seal Beach, Huntington Beach and Alamitos Heights crude, 14 to 32.9 gravity, inclusive; Richfield, Olinda-Brea and Fullerton, 14 to 30.9 gravity; Torrance and Inglewood, 14 to 28.9 gravity.

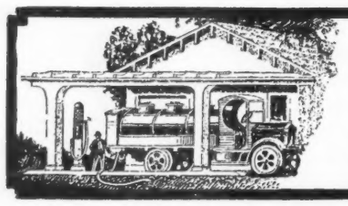
Column 2—Whittier crude, 14 to 22.9 gravity; Coyote Hills, 14 to 30.9 gravity.

Column 3—Kern River, Newhall and McKittrick, 11 to 19.9 gravity; Midway-Sunset, Buena Vista and Elk Hills, 11 to 33.9 gravity; Lost Hills, 11 to 34.9 gravity; oil below 14 gravity posted at 50 cents.

Column 6—Oil below 14 gravity posted at 45 cents.

Columns 8 and 9—Posted by Union Oil Co. only.

Kettleman Hills, 55 gravity and above, $1.65 (posted by Standard Oil Co. of California).



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns May 13

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Chicago†	18.0	19.0	3.0	13.0
Decatur, Ill.	18.2	19.2	3.0	13.1
E St. Louis	17.4	18.4	3.0	12.2
Joliet	18.4	19.4	3.0	13.3
Peoria	18.2	19.2	3.0	13.1
Quincy	18.2	19.2	3.0	12.9
Davenport, Ia.	18.5	19.5	3.0	13.3
Des Moines	18.5	19.5	3.0	13.3
Keokuk	18.5	19.5	3.0	13.3
Sioux City	18.1	19.1	3.0	12.9
Duluth, Minn.	19.5	20.5	3.0	13.9
Mankato	19.1	20.1	3.0	13.7
Minneapolis	19.2	20.2	3.0	13.9
LaCrosse, Wis.	18.2	19.2	2.0	14.0
Milwaukee	17.1	18.1	2.0	12.9
Madison	17.3	18.3	2.0	13.1
Detroit, Mich.	18.8	19.8	3.0	14.7
Grand Rapids	18.7	19.7	3.0	14.6
Saginaw	18.9	19.9	3.0	14.8
Evansville, Ind.	19.0	20.0	4.0	14.0
Fort Wayne	19.4	20.4	4.0	14.4
Indianapolis	19.2	20.2	4.0	14.2
South Bend	19.4	20.4	4.0	14.4
Fargo, N. D.	20.9	21.9	3.0	15.9
Huron, S. D.	20.3	21.3	4.0	14.7
Sioux Falls	19.1	20.1	4.0	14.4
K. C., Mo.*	17.9	18.9	3.0	11.6
Springfield*	17.8	18.8	3.0	12.5
St. Louis*	16.9	17.9	2.5	12.3
St. Joseph	17.5	18.5	2.0	12.2
Wichita, Kans.	16.8	15.8	3.0	11.8
Bartlesville, Ok.	17.5	20.5	4.0	11.5

*State tax 2 cents; remainder city tax
†Effective February 20, discounts on Q.D.A. in Chicago district 2 cents off service station price on purchases of 500 gallons or more per month and 4 cents on purchases of 1,000 gallons or more per month.

The following quantity discounts from the service station price are allowed on monthly sales of gasoline; 2,000 gallons or less, 2 cents; more than 2,000 and less than 6,000 gallons, 2½ cents; more than 6,000 gallons, 3 cents; 100,000 gallons or more, 4½ cents. Discounts are allowed each month and they are not cumulative. Delivery tickets showing date and quantity delivered must be sent to the seller before the tenth of the month to secure the discount on the previous month's purchases.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	14.7	12.8
V. M. & P. Naphtha	16.7	13.9
Cleaner's naphtha	17.0	14.9
Stanisol	17.0	15.4

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANOLIND FURNACE OIL IN CHICAGO

Less than 100 gallons	9.0
100 to 349 gallons	8.0
350 gallons or more	7.5

Note—Outside Chicago furnace oil discount of 1 cent per gallon is given on deliveries of 100 to 349 gallons and 1½ cents on deliveries of 350 gallons or more.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Dallas, Tex.	16.0	20.0	4.0	12.0
Fort Worth	16.0	19.0	4.0	12.0
Houston	15.0	19.0	4.0	11.0
San Antonio	15.0	19.0	4.0	11.0
El Paso	16.0	20.0	4.0	13.0
Texarkana	16.0	16.0	4.0	12.0
Muskogee*	16.0	19.0	4.0	10.0
Okla. City*	16.0	19.0	4.0	10.0
Tulsa*	16.0	20.0	4.0	10.0
Ft. Smith, Ark.	14.0	15.0	5.0	12.0
Little Rock	18.0	19.0	5.0	13.0

*Gasoline tank wagon price to dealers 2 cents under posted tank wagon.

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Denver, Colo.	17.0	20.0	4.0	15.5
Pueblo	18.0	21.0	4.0	15.5
Grand Junction	23.0	26.0	4.0	19.0
Casper, Wyo.	19.0	22.0	4.0	14.0
Cheyenne	20.5	23.5	4.0	15.5
Butte, Mont.	24.5	27.5	5.0	20.0
Helena	24.5	27.5	5.0	20.0
Salt Lake, Utah	20.0	23.0	3.5	17.0
Albu'que, N. M.	21.0	24.0	5.0	17.0
Boise, Idaho	23.5	26.5	5.0	19.0
Twin Falls	23.5	27.5	5.0	19.0

PENNSYLVANIA—DELAWARE AND PART NEW ENGLAND

The Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Pittsburgh, Pa.	15.0	*21.0	...	13.0
Philadelphia	15.0	*21.0	...	13.0
Scranton	15.0	*21.0	...	13.0
Allentown	15.0	*21.0	...	13.0
Altoona	15.0	*21.0	...	13.0
Erie	15.0	*19.0	...	13.0
Dover, Del.	18.0	20.0	3.0	13.0
Wilmington	18.0	20.0	3.0	13.0
Springf'd, Mass.	17.5	19.5	2.0	12.5
Worcester	17.3	19.3	2.0	12.3
Boston	16.5	18.5	2.0	11.5
Providence, R.I.	16.7	18.7	2.0	11.7
Hartford, Conn.	17.5	19.5	2.0	12.5
New Haven	17.6	19.6	2.0	12.6

*Includes tax of 4 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the State. The Atlantic Refining Co. recognizes a 2-cent per gallon discount on gasoline from its posted tank wagon markets on sales to dealers for purposes of resale. The Atlantic Refining Co. also recognizes a maximum discount of 2 cents per gallon on gasoline to commercial accounts under contract for one year.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Albany, N. Y.	17.6	19.6	2.0	15.6
New York*	16.3	18.3	2.0	14.3
Buffalo	17.8	19.8	2.0	14.8
Rochester	18.0	20.0	2.0	14.0
Syracuse	18.8	20.8	2.0	14.8
Boston, Mass.	16.5	18.5	2.0	13.5
Augusta, Me.	19.8	21.8	4.0	14.8
Manch't'r, N. H.	19.4	21.4	4.0	14.4
Burlington, Vt.	19.6	21.6	4.0	15.3

*Prices in steel barrels.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Atlanta, Ga.	21.0	23.0	6.0	15.5
Augusta	20.0	22.0	6.0	15.5
Macon	20.0	22.0	6.0	14.0
Savannah	19.0	21.0	6.0	14.0
Birm'ham, Ala.	21.0	23.0	5.0	14.5
Mobile	18.0	18.0	4.0	13.5
Montgomery	21.0	23.0	4.0	15.0
Clarks'le, Miss.	19.0	21.0	5.0	12.5
Jackson	20.0	22.0	5.0	13.0
Natchez	19.5	21.5	5.0	13.0
Gulfport	21.0	23.5	5.0	13.0
Vicksburg	19.5	21.5	5.0	13.0
Jack'ville, Fla.	21.0	23.0	6.0	14.0
Miami	22.0	24.0	6.0	14.0
Pensacola	19.0	21.0	6.0	13.5
Tampa	21.0	23.0	5.0	13.0
Lexington, Ky.	19.0	20.0	5.0	14.5
Covington	20.0	21.0	5.0	14.5
Louisville	20.0	22.0	5.0	13.6
Ashland	20.0	21.0	5.0	15.0
Catlettsburg	20.0	21.0	5.0	15.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city tax of 1 cent on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Birmingham and Mobile state taxes add 1-cent city levy. To Gulfport state tax add privilege tax of 2 cents.

Effective April 2, price to dealers 2 cents under posted tank wagon price.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Atlantic City	16.5	18.5	2.0	13.5
Newark, N. J.	15.5	17.5	2.0	12.5
Annapolis, Md.	18.0	20.0	4.0	13.0
Baltimore	17.2	19.2	4.0	10.5
Cumberland	19.0	21.0	4.0	14.0
Washington	15.7	17.7	2.0	12.7
Danville, Va.	19.8	21.8	5.0	13.8
Norfolk	18.3	20.3	5.0	12.0
Petersburg	19.3	21.3	5.0	13.3
Roanoke	20.0	21.0	5.0	14.0
Richmond	18.7	20.7	5.0	12.7
Charles'n, W.Va.	18.5	20.5	4.0	12.5
Keyser	19.1	21.1	4.0	14.1
Parkersburg	17.2	19.2	4.0	11.2
Wheeling	18.4	20.4	4.0	12.4
Charlotte, N. C.	19.3	20.3	5.0	14.3
Hickory	20.8	22.8	5.0	14.8
Mt. Airy	20.5	22.5	5.0	14.5
Salisbury	20.7	20.0	5.0	14.7
Charleston, S. C.	19.3	21.3	6.0	12.3
Columbia	21.2	23.2	6.0	14.2

A 2-cent per gallon discount off the gasoline tank wagon price is offered to dealers.

PACIFIC COAST TERRITORY

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
San Francisco	22.0	23.0	3.0	15.5
Los Angeles	21.5	22.5	3.0	15.5
Reno, Nev.	27.0	28.0	4.0	19.0
Portland, Ore.	23.5	23.5	4.0	16.5
Seattle, Wash.	22.5	22.5	3.0	16.5
Tacoma	22.5	23.5	3.0	16.5
Spokane	26.5	26.5	3.0	20.5
Phoenix, Ariz.	18.0	22.0	4.0	20.0

Above prices are at company's plant or depots as company does not operate stations. A 6-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where discount is 1 cent.

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Omaha	19.25	21.25	4.0	13.25
McCook	19.75	22.75	4.0	14.75
Norfolk	19.75	21.75	4.0	13.75
N. Platte	20.75	22.75	4.0	14.50
Scottsbluff	20.75	22.75	4.0	14.25

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
Ohio points*	19.0	20.0	4.0	†13.0

*Dealers and commercial accounts 2 cents under tank wagon.
†Service station price 15 cents.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	incl'ds tax of	tank wagon
N. Orleans, La.*	16.0	16.0	5.0	12.0
Baton Rouge	16.0	17.0	4.0	14.0
Alexandria	17.0	17.0	4.0	14.0
Lafayette*	18.0	20.0	5.0	14.0
Lake Charles*	16.0	16.0	5.0	14.0
Shreveport	14.0	18.0	4.0	14.0
Knoxv'le, Tenn.	20.0	22.0	5.0	16.0
Memphis	18.0	20.0	5.0	12.5
Chattanooga	20.0	22.0	5.0	16.0
Nashville	19.0	21.0	5.0	16.0
Bristol	20.0	22.0	5.0	14.0
Lt. Rock, Ark.	18.0	19.0	5.0	13.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

TANK WAGON PRICE CHANGES

Continental Oil Co. advanced the gasoline station price in Salt Lake City, Utah, May 1 to 23 cents.

SANTA FE LEASES

WASHINGTON, D. C., May 12.—Atchison, Topeka & Santa Fe Railway Co. has been authorized to acquire control by lease of the oil fields of Santa Fe Railway Co.

BUREAU OF MINES RESEARCH

WASHINGTON, D. C., May 12.—Hearings are to be held on a bill introduced by Representative Harold J. Hoffman providing an appropriation of $250,000 for a Bureau of Mines research plant at New Brunswick, N. J. Rutgers University, located at New Brunswick, has offered to donate the land for this plant. The bill is now pending with the Committee on Mines and Mining of the House.

MEXICO'S PRODUCTION

NEW YORK, May 12.—Production of crude in the Panuco and Tuxpam districts of Mexico for the week ended April 26 averaged 84,286 bbls. daily, against 84,714 bbls. per day in the previous week. Light oil output in the week ended April 26 showed a daily average of 41,429 bbls. per day, against 41,714 bbls. daily in the previous week, with heavy oil production aggregating 42,857 bbls. per day, against 43,000 daily in the preceding week.

CRUDE OIL PRICES

(Continued from Page 133)

Under 33 gravity	.65
Dutton Creek (Feb. 15, 1930)	1.25
Rock Creek, Wyo.	1.35
Salt Creek	See gravity table
Big Muddy	1.35
Grass Creek, heavy (July 27, 1928)	.90
Grass Creek, light	1.55
Mule Creek (May 21, 1929)	1.20
Elk Basin	1.55
Lance Creek	1.63
Poison Spider (March 14, 1927)	1.00
Notches (March 14, 1927)	.65
Rex Lake (February 22)	1.10
Osage	1.62
Lost Soldier (contract, May 22)	1.06
Hamilton Dome (March 14, 1927)	.85
Greybull (Feb. 15, 1930)	1.45
Four Bear (May 21, 1929)	.85
Cat Creek	1.55
Pondera (Montana) (Feb. 15, 1930)	1.80
Sunburst (Montana) (Feb. 15, 1930)	1.65
Torchlight (May 21, 1929)	1.65
Hogback (Feb. 15, 1930)	1.40
Artesia (New Mexico)	1.05
Lea County	See gravity table

Note—Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (April 10, 1930)*	$1.15
Luling (April 10, 1930)	.85
Mirando (April 10, 1930)†	.85
Pettus (April 10, 1930)§	1.40
Salt Flat (April 10, 1930)§	1.15
Thrall‡	
Lytton Springs (Lockhart)	See gravity table
Somerset (April 10, 1930):	
Below 33 gravity	$1.16
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.18
35 to 35.9 gravity	1.21
36 to 36.9 gravity	1.23
37 to 37.9 gravity	1.25
38 gravity and above	1.27

*Posted by Humble Oil & Refining Co. and Magnolia Petroleum Co. †Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co. ‡Thrall prices same as North Central Texas less 19½ cents per cwt. freight. §Humble Oil & Refining Co.

EASTERN STATES

Joseph Seep Purchasing Agency

(Effective May 1, 1930)

Penna Grade Oil in New York Transit Lines (New York)	$2.50
Bradford District Oil in National Transit Lines (Pennsylvania)	2.50
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.55
Penna Grade Oil in Southwest Pennsylvania Lines (West Virginia)	2.50
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	2.40
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	2.20
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 22,1929)	1.75
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Lines (Feb. 17, 1930)	1.75
Somerset Oil in Eureka Pipe Line Lines (Kentucky) (April 11, 1930)	1.31
Somerset Oil in Cumberland Pipe Line Lines (Kentucky) (April 11, 1930)	1.47
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (Jan. 29)	.60
Wayne District Oil in Cumberland Pipe Lines (April 11, 1930)	1.34

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective April 11, 1930)

Lima	$1.76
Wooster	1.86
Illinois	1.66
Indiana	1.47
Princeton	1.61
Plymouth	1.23
Waterloo (Nov. 17, 1926)	1.36
Western Kentucky	1.51
Dundee, Mich. (April 16)‖	
	.....Same as Mid-Continent gravity scale
Upper and Lower Traverse sands, Mich (April 16)‖	
	.....Same as Mid-Continent gravity scale
Saginaw, Mich. (April 11)†	
	.....Same as Mid-Continent gravity scale
Cumberland, Clay, Barren, Clinton and Monroe Counties, Kentucky (March 15)‡	1.50
Oil in line in Stoll Oil Refinery Co. in Oil City, Ky. (April 18)§	1.45
Oil Springs (Canada) (April 11, 1930)¶	2.17
Petrolia (Canada) (April 11, 1930)¶	2.10

*Posted by Pure Oil Co. †Posted by Sun Oil Co. ‡Posted by Paragon Development Co. §Posted by Stoll Oil Refining Co. ‖Posted by Imperial Oil Co., Ltd. ¶Posted by Standard of Indiana for boat shipment. Local refiners posted Mid-Continent prices on April 11.

MEXICAN CRUDE

Panuco*	$ .67

*Based on February transactions.

Give every motorist the gas-performance he should have!...

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In these days a motorist wants to buy gasoline where he can select it to fit his own engine's requirements, and his own driving habits.

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And—if he prefers to pay three cents less per gallon—he can fill up with Sinclair Regular Gasoline and get economy and mileage in a gas that's full of eager power! The quality gasoline at a popular price!

Make your Stations *the Stations* where motorists can *choose* from three gasolines, with every assurance of fuel satisfaction. Try selling Sinclair Three-Gas Service!

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45 Nassau Street, New York
Atlanta Chicago Houston Kansas City

Oil Outlook Distinctly Favorable

Distribution Running Well Ahead of Last Year, Says President Seubert of Standard of Indiana. Amerada Expects Improvement

Standard Oil Co. of Indiana declared the regular quarterly dividends of 62½ cents, payable June 16 to stock of record May 16. In announcing the dividend action, Edward G. Seubert, president, stated that the company is enjoying a good volume of business. "Our distribution is running well ahead of last year," he said. "While this is partly due no doubt to the success our new products are meeting on the market, it reflects also the good consumer demand which the oil industry in general is feeling."

Amerada Corp.

Amerada Corp. reports for quarter ended March 31, 1930, net loss of $76,585 after depreciation, depletion, taxes, etc. This compares with net income of $50,762 equal to 6 cents a share on 922,075 no-par shares of stock in first quarter of 1929.

"First quarter's unsatisfactory earnings," the company states, "resulted from low crude oil prices and curtailed production as required by the stabilization program adopted by the industry. Our greatly increased potential production has enabled us to increase our actual allowable output since the end of March and the second quarter should show substantial improvement in earnings. The outlook for the balance of the year is distinctly favorable."

Lone Star Gas

All common stock subscribed and paid for under the subscription privilege, warrants for which were mailed to stockholders May 1, will participate in the stock dividend to be paid to stockholders of record February 2, 1931, whether the subscription rights are paid for in full on or before July 3, 1930, or in installments, the last of which matures January 3, 1931.

The statement in the letter to stockholders, that purchasers of new stock on the installment plan would not participate in dividends declared or paid prior to January 3, 1931, refers only to cash dividends. Payment of the stock dividend was purposely postponed until February next year in order that stockholders taking up their rights on the installment plan might participate.

Under the recent offering of rights, common stockholders of record May 31, 1930, were given the privilege of subscribing at $22.50 a share in the ratio of one additional share for each six held.

Houston Oil

Report of Houston Oil Co. of Texas and Houston Pipe Line Co., for quarter ended March 31, 1930, shows consolidated net income of $523,249 after interest, depreciation, depletion, abandoned leases, federal taxes, etc., equivalent after dividend requirements on $8,947,000 6 per cent preferred stock, to $1.55 a share on 249,686 shares of common stock. This compares with $345,147 or 84 cents a share on common in first quarter of 1929.

Houston Oil Co. of Texas, excluding Houston Pipe Line Co., reports for quarter ended March 31, 1930, net income of $98,477 after charges comparing with net loss of $20,411 in March quarter of previous year.

Net income of Houston Pipe Line Co. for first quarter of 1930 was $424,772 after charges and federal taxes, against $365,558 in first quarter of 1929.

Penn-Mex Fuel

Penn-Mex Fuel Co. declared a dividend of $1, payable May 20 to stock of record May 12. On December 14, 1929, a similar dividend was paid.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb, based on closing quotations for Saturday was as follows:

Sept. 21	57.93	Jan. 15	47.13
Sept. 28	58.63	Jan. 22	47.13
Oct. 5	57.00	Jan. 29	47.46
Oct. 12	59.75	Feb. 5	48.13
Oct. 19	58.70	Feb. 12	47.49
Oct. 26	54.59	Feb. 19	45.85
Oct. 31	42.29	Feb. 26	46.71
Nov. 8	48.31	Mar. 5	46.79
Nov. 15	47.61	Mar. 12	48.30
Nov. 22	47.76	Mar. 19	51.00
Nov. 29	48.60	Mar. 26	51.55
Dec. 4	50.60	Apr. 2	53.26
Dec. 11	50.51	Apr. 9	52.04
Dec. 18	49.24	Apr. 16	53.39
Dec. 24	47.36	Apr. 23	53.76
Dec. 31	48.86	May 1	50.23
Jan. 8	48.56		

Warner-Quinlan

The additional 144,655 shares of no-par capital stock of Warner-Quinlan Co., which New York Stock Exchange has admitted to listing, are to be issued principally in connection with company's re-

TRANSACTIONS IN OIL SHARES ON NEW YORK STOCK EXCHANGE

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended May 7 Sales	Week ended May 7 High	Week ended May 7 Low	Week ended May 7 Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
29¾	18	2,500	25¾	25¼	25¾	Amerada Corp.	(sh)	922,075	N.P.	50cQ	1-31-30	37⅝	27⅝	43⅞	27⅛	42⅝	17½
37	20½	100	27⅜	25	25	American Republic Corp.	(sh)	209,180	N.P.	.....	3-20-29	82½	35⅛	85	51⅛	64⅜	12½
50¼	32½	40	48½	48½	48½	Associated Oil		$57,260,300	$25	50cQ	12-31-29	50¼	35	53⅜	37½	47¼	34½
51⅜	36¼	9,900	42⅜	41⅛	41¾	Atlantic Refining		$66,763,775	$25	25cQ	12-16-29	131⅜	104	66⅜	50	77⅞	30
34	20⅛	7,900	27½	26½	26½	Barnsdall Corp.		$56,546,600	$25	50cQ	12-7-29	35½	20¾	53	20	49⅛	20
30½	19½	10,300	26¾	26	26	Continental Oil of Delaware	(sh)	4,741,554	N.P.	.....	3-31-27	..	..	..	..	47⅛	18
71¼	49¼	2,300	56½	55½	56½	General Asphalt	(sh)	413,333	N.P.	50cQ	.....	96¾	65	94⅞	68	94⅜	42¼
116⅞	52¼	20,300	97⅜	90¼	91	Houston Oil		$24,968,600	$100	.....	.....	175¾	60⅛	167	79	109	26
32	20¼	3,500	26¼	25⅜	25¾	Independent Oil & Gas	(sh)	1,362,295	N.P.	50cQ	1-31-30	32¾	17⅝	38⅜	21¾	39⅜	17¾
28⅜	16	20,900	21¼	19⅛	19⅛	Indian Refining		$12,565,070	$10	.....	5-31-24	12⅛	7⅝	39⅝	9	53	13⅛
26½	21¼	500	24¼	24	24	Lago Oil & Transport	(sh)	3,992,122	N.P.	.....	5- 1-27	37¾	20½	39¼	27¾	38⅜	16½
12	8	1,700	10	9⅜	10	Louisiana Oil Refining	(sh)	1,190,063	N.P.	.....	.....	18⅛	10	19¾	9⅜	18	7
10⅜	5⅛	100	6½	6½	6½	Maracaibo Oil	(sh)	330,000	N.P.	.....	.....	22¾	12	25½	12½	18½	5⅛
37	16⅛	26,400	28⅜	26	26½	Mexican Seaboard	(sh)	1,244,383	N.P.	.....	12-15-20	9¼	3	72	4⅝	69⅜	9¼
33	23½	5,600	28¾	28	28	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	50cQ	12-15-29	39⅜	25½	44½	25⅛	39⅞	22⅛
2½	⅞	300	1⅝	1½	1½	Middle States, ctfs.		$23,736,130	$10	.....	7- 1-23	3¾	1⅝	7⅜	2⅜	5⅛	¾
60⅛	51⅝	100	56	56	56	Pan American P. & T.		$50,084,700	$50	.....	10-20-27	65⅞	40⅛	54⅞	38¼	69	40½
63¾	50½	2,500	61½	60	60⅞	Pan American P. & T. "B"		$121,110,650	$50	.....	11-15-24	66⅜	40¼	58⅞	37⅜	69¼	40½
		No sales.				Pan American Western B		$400,000	N.P.	.....	1-30-27	37⅞	16⅜	28⅜	15½	18½	13⅝
11⅞	4⅛	900	10¾	10⅝	10⅝	Panhandle P. & R.	(sh)	199,370	N.P.	.....	.....	18⅞	8	21¾	11½	15¼	3
69	47½	200	69	69	69	Panhandle P. & R. pfd.		$2,564,400	$100	.....	7- 2-23	83	54	108	70	76	47½
44⅜	29¼	9,500	40⅞	40⅛	40¼	Phillips Petroleum	(sh)	2,593,075	N.P.	50cQ	1- 2-30	60¼	36¼	53⅞	35¼	47	24¼
2½	1	1,200	2⅛	1⅞	2	Pierce Oil Corp.		$29,622,831	$25	.....	.....	1⅛	½	5¼	½	3⅜	1
7⅛	2¼	9,700	6½	5¾	6½	Pierce Petroleum	(sh)	2,500,000	N.P.	.....	.....	5½	2½	7	3½	5⅞	½
54	45	300	49	49	49	Prairie Oil & Gas		$60,848,000	$25	50cQ*	12-31-29	55½	45⅝	68	46	65⅝	40½
60	53	3,800	53	51	51⅛	Prairie Pipe Line		$101,250,000	$25	75cQ†	12-31-29	190	130¾	280	172	65	45
11⅞	6½	2,200	8¼	8	8¼	Producers & Refiners		$37,438,950	$50	.....	9-15-23	33⅞	16⅜	29⅞	16	25⅞	4
40	31	20	34	34	34	Producers & Refiners pfd.		$2,845,350	$50	.....	5- 1-25	50	36⅞	49⅝	41	46¾	25½
27¼	21⅛	2,400	24	23½	23⅝	Pure Oil		$75,959,250	$25	37½cQ	12- 2-29	33½	25	31⅝	19	30⅜	20
28¼	20⅝	5,300	24½	23½	23½	Richfield Oil		$52,410,875	$25	50cQ	11-15-29	28⅝	25⅜	56	23	49⅝	20
49	37¼	1,700	42¾	42	42	Rio Grande Oil	(sh)	1,236,270	N.P.	$2A	7-25-29	..	..	37½	32	42½	15
56½	49¼	1,400	53½	52¾	53	Royal Dutch, N. Y.	(sh)	611,303	$1.873	.....	9-13-29	54½	44¼	64	44⅝	64	43⅛
48⅜	42⅜	20	45¼	45¼	45¼	Shell Transport & Trading Co.		£23,985,000	£1	$1.45	7-23-29	48⅝	40½	47⅞	41⅜	57½	40⅝
25½	20⅛	2,200	23	22⅝	22⅝	Shell Union Oil	(sh)	13,066,497	N.P.	35cQ	12-31-29	31¾	23⅝	39¼	23¼	31⅜	19
37	22⅞	2,100	28½	27¼	27⅛	Simms Petroleum		$8,353,620	$10	40cQ	12-14-29	25⅜	14¼	27¼	18⅛	40⅜	15
32	21⅝	14,200	27¾	26⅞	26⅞	Sinclair Consolidated	(sh)	5,500,000	N.P.	50cQ	1-15-30	22⅜	15	46¾	17⅜	45	21
112¼	109	100	110	110	100	Sinclair Consolidated pfd.		$16,025,250	$100	$2Q	11-15-29	104½	97	110	102½	111	103
42	28⅞	3,700	36	34½	34½	Skelly Oil		$27,441,250	$25	50cQ	12-16-29	37⅜	24⅛	42⅝	25	40½	28
75	55½	5,200	70⅜	69¼	69¼	Standard Oil of California	(sh)	12,594,098	N.P.	62½cQ	2-15-30	60¾	50⅜	80	63	81⅞	51½
25¾	16½	2,900	21⅞	21	21	Standard Oil of Kansas		$8,000,000	$25	50cQ	12-16-29	20⅞	14⅝	37¾	15	33⅜	18
84⅞	58	84,400	77	75	75¼	Standard Oil of New Jersey		$634,999,200	$25	25cQ*	12-16-29	41⅜	35⅛	59⅜	37¾	83	49
40⅜	31¼	14,100	36⅞	35⅝	35¾	Standard Oil of New York		$445,223,675	$25	40cQ	12-16-29	34¼	29¾	44¼	28¾	48⅛	31¾
70	53	500	62½	61⅛	62	Sun Oil	(sh)	1,416,869	N.P.	25cQ	12-16-29	34⅞	30	77	31½	86⅜	55
8⅝	5¼	19,600	8½	7⅝	8	Superior Oil Corp.	(sh)	776,979	N.P.	.....	12-20-20	..	..	..	..	24	5¼
60½	50⅞	6,800	58	57	57¼	The Texas Corporation		$246,204,900	$25	75cQ	1- 1-30	58	45	74¾	50	71⅞	50
14½	8⅞	1,800	11	10¼	10½	Texas Pacific Coal & Oil Co.		$9,304,890	$10	2½%A‡	12-31-29	18⅞	12	26⅝	12⅛	23⅞	9½
31	19½	200	30¾	28¾	30¾	Tide Water Oil	(sh)	2,191,759	N.P.	20cQ	12-31-29	29⅛	19	41½	19⅝	40	14
94⅞	86⅛	1,100	91½	90⅞	91	Tide Water 5½% pfd.		$19,947,000	$100	$1.25Q	11-15-29	90⅛	85	100⅛	86	97½	85⅛
17⅞	10⅜	12,700	15⅜	15	15¼	Tide Water Associated	(sh)	5,560,424	N.P.	30cS	2-15-30	19⅛	15¾	25	14⅝	23½	10
89⅜	78	500	86½	86½	86½	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	2- 2-30	..	..	..	..	90⅞	74⅛
24	16¼	11,100	20½	20	20⅛	Transcontinental Oil	(sh)	3,742,029	N.P.	.....	.....	10⅜	3¾	14¾	7¼	15¼	5⅛
50	41⅜	300	45½	44⅝	44¾	Union Oil of California		$104,342,375	$25	50cQ	11- 9-29	56½	39⅝	58	42⅜	57	42⅛
38½	31	200	33½	33	33½	Union Tank Car	(sh)	1,254,048	$100	$1.25Q	12- 2-29	127½	94	128⅛	110	163¾	121⅞
27	16⅝	3,900	19⅜	18¾	19	Warner-Quinlan	(sh)	632,948	N.P.	50cQ	1- 2-30	34½	24½	44⅞	26	42⅞	15
		No sales.				White Eagle Oil & Refining	(sh)	505,100	N.P.	50cQ	1-20-30	27½	20	38	20⅛	38	25
21	11½	100	18	18	18	Wilcox Oil & Gas	(sh)	428,907	N.P.	.....	5-10-28	..	..	..	..	29¾	12⅞

*Plus extra dividend of 25 cents. †Plus extra dividend of 50 cents. ‡Payable in stock.

In comparing highs and lows for the several years in the three tables it will be necessary to take into consideration cases where there have been splits in the stock.

cent offering of rights. Some 18,065 shares will be used to meet additional requirements for conversion of the $6,860,000 10-year 6 per cent debentures. The listing increases outstanding stock to 917,603 shares, with 1,500,000 shares authorized.

Standard of Nebraska

Standard Oil Co. of Nebraska has distributed 9,114 shares of capital stock to employes who have been purchasing the stock on a partial payment system evolved by the company three years ago. Market value of the stock distributed was approximately $450,000. There are now more than 900 owners, in Nebraska, of stock in Standard Oil of Nebraska.

A. H. Richardson, president, states that the company's sales in 1929 were $12,452,955. Pay roll amounted to $1,755,214. Freight paid was $1,428,426 and state inspection and gasoline tax fees were $1,638,700. Federal, state, county and city taxes for the year were $252,463. Ninety-eight per cent of the company's products came from Wyoming.

S. O. of Nebraska

As in four preceding quarters, Standard Oil Co. of Nebraska declared an extra dividend of 25 cents in addition to the regular quarterly dividend of 62½ cents, both payable June 20 to stock of record May 24.

Superior Oil

New York Stock Exchange has admitted to listing 250,000 additional shares of no-par capital stock of Superior Oil Corp. Half the amount has been underwritten at $8 a share, and 125,000 shares are under option at $8 a share, the option to expire not later than 90 days from April 29, 1930. Stockholders have no preemptive rights. Proceeds from sale of the stock will be used to pay off certain indebtedness and to provide additional working capital.

At a meeting of directors of the Superior Oil Corp., C. E. Bush and C. A. Steel of Tulsa were elected directors. Mr. Bush succeeds H. F. Hansell, Jr., resigned, and Mr. Steel fills the vacancy caused by the resignation of Maxwell Stevenson some time ago.

McColl-Frontenac Oil

McColl-Frontenac Oil Co., Ltd., Montreal, reports for fiscal year ended January 31, 1930, net income of $1,431,970 after depreciation, interest, income taxes, reserve for dividends on subsidiary stock, etc., equivalent, after 6 per cent preferred dividends, to $1.91 a share on 500,000 shares of no-par common stock. Previous report of company was for 13 months ended January 31, 1929, and showed net income of $1,126,259, equal to $1.42 a common share.

Coast Counties Gas

Coast Counties Gas & Electric Co. has applied to the California Public Service Commission to issue $4,000,000 first mortgage bonds. Proceeds of the issue will be used to finance additions and betterments and for retirement of outstanding bonds of subsidiaries, including $126,000 of Sanbonito Light & Power Co. and

(Continued on Page 139)

INDEPENDENT OILS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended May 7 Sales	Week ended May 7 High	Week ended May 7 Low	Week ended May 7 Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
⅜	⅛	7,100	¼	3/16	3/16	Amer. Con. Oilfields		$11,018,000	$5	.....	.....	2 7/8	.55	1½	.53	72c	⅛
4½	1⅛	13,500	4⅛	3⅞	4	Amer. Maracaibo	(sh)	700,000	N.P.	.....	.....	7½	2¾	9½	3⅛	8⅝	1⅛
1⅜	1	100	1	1	1	Argo Oil	(sh)	683,971	$10	.....	.....	2¾	1	4½	2¼	5	1½
21	20½	200	21	20½	21	British American (new, C.W.I.)	.....	$1,311,321	N.P.	25cQ*	1- 2-30	40	20½	55	32¾	62	7⅞
2¾	¾	300	2¼	2	2¼	Carib. Syndicate	.....	$131,250	25c	.....	.....	28¼	15½	4½	3⅞	4⅞	1
44½	26½	65,900	35½	34½	34¾	Cities Service	(sh)	24,290,359	N.P.	30cA†	1- 2-30	58¾	40¼	90⅞	54	68⅛	20
93⅞	88	300	92⅞	92⅞	92⅞	Cities Service pfd.	(sh)	1,500,000	N.P.	50cM	1- 2-30	95⅝	87	103½	94½	98¾	84
⅜	¼	2,100	½	½	½	Columbia Syndicate	.....	$2,000,000	$1	.....	.....	3⅞	1⅛	3¼	.76	2	½
5⅞	3⅞	400	4⅜	4	4	Cons. Royalty	.....	$5,000,000	$10	15cQ	10-25-29	9¾	6¾	8⅞	6¼	11⅛	2½
7½	5⅜	800	6⅜	6⅛	6⅜	Creole Petroleum	(sh)	5,977,873	N.P.	.....	.....	14⅞	9½	17½	9½	11⅜	5⅝
1	¼	200	⅝	⅝	⅝	Crown Central	(sh)	578,000	N.P.	.....	.....	3	.50	3¼	.76	2½	¼
12⅞	7¼	1,200	10⅜	10	10¼	Darby Petroleum	(sh)	1,019,392	N.P.	25cQ	1-15-30	12	4	33½	3¼	26	6½
11	4½	400	8⅜	8	8⅜	Derby Oil & Refining	(sh)	500,000	N.P.	.....	.....	2½	74	2¾	1	11	2
60	30	100	53	53	53	Derby Oil & Refining pfd	.....	$48,500	N.P.	.....	.....	16¾	4	21⅛	7½	44	20¾
166⅞	131¼	1,400	153	151	151	Gulf Oil Corp.	(sh)	4,504,921	$25	37½cQ	1- 1-30	118	86¼	165	101⅛	209	115
1⅜	¾	2,200	1⅜	1¼	1¼	Intercontinental Pet.	.....	$5,682,000	$5	.....	.....	2½	.80	3⅜	1	2⅞	⅜
3	1⅞	500	2⅛	2⅛	2⅛	Kirby Petroleum	(sh)	750,000	N.P.	.....	.....	2¼	1⅛	3	1¼	3⅝	1¼
4⅜	1⅛	1,600	3¼	2⅞	3	Leonard Oil & Dev.	.....	$50,000,000	$25	.....	.....	10⅞	5¼	9⅜	5⅛	6¼	1
29	18⅝	300	26¾	24⅛	24⅛	Lion Oil & Refining	(sh)	250,000	N.P.	50Q	1-31-30	27½	20	43⅞	20	38⅞	18
55⅞	34⅛	6,300	50	48⅜	48¾	Lone Star Gas	(sh)	5,000,000	N.P.	20eQ	12-31-29	59⅜	37	69¼	48½	67⅞	28
4⅜	4	1,100	4⅜	4¼	4⅜	Lone Star Gas R Ts	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
⅜	¼	300	½	⅜	⅜	Magdalena Syndicate	(sh)	850,000	$1	.....	.....	2¾	.80	1⅞	.50	1¼	¼
16	12	100	15¼	15¼	15⅛	Margay Oils	.....	$160,000	N.P.	50eQ	1-10-30	52	12	48½	32	38⅛	14
7½	2	100	3¼	3¼	3¼	Mexico-Ohio Oil	.....	.....	.....	.....	.....	12⅛	5	8	2¾	6⅜	2½
¾	½	700	⅝	⅝	⅝	Mountain & Gulf	.....	$4,000,000	$1	2eQ	1-15-30	1½	1	1⅜	.76	1½	¾
12⅛	8	200	10⅝	10½	10½	Mountain Producers	.....	$1,682,182	$10	40eQ	1- 2-30	29¼	22¾	28⅞	19½	22⅞	7
3½	2½	400	2¾	2⅝	2⅝	New Bradford Oil	.....	$1,095,291	$5	12½eQ	1-15-30	5⅞	4⅝	5⅝	4¼	5	2¼
7¼	3½	400	5	4⅞	4⅞	New Mex. & Arizona	.....	$1,000,000	$1	.....	.....	16	9¼	11⅞	7⅛	9⅜	2¼
11¼	6⅞	100	9⅛	9⅛	9⅛	North Central Texas	(sh)	400,000	N.P.	15eQ	12- 2-29	12¾	9½	14¼	8½	18½	6⅛
2½	1	3,100	1⅝	1⅜	1⅝	Pandem	(sh)	489,875	N.P.	.....	.....	9⅜	3¼	6	2⅛	3½	½
4⅜	1⅞	100	2⅞	2⅞	2⅞	Pantapec Oil	(sh)	1,506,000	N.P.	.....	.....	12⅛	7	15⅝	8½	10¼	1⅞
No sales.						Pennok Oil		$150,000	N.P.	.....	.....	13½	5⅛	7⅜	4⅞	7¾	4⅜
10	9	100	10	10	10	Red Bank Oil	(sh)	250,000	N.P.	.....	.....	24⅜	7	18	4⅞	16	9⅝
5⅜	2⅛	900	3⅞	3⅝	3⅞	Reiter-Foster	(sh)	388,584	N.P.	10eQ	12- 9-29	15½	3½	12⅞	4⅛	8½	1⅛
7	3⅝	200	5⅜	5⅜	5⅜	Ryan Consolidated	(sh)	500,000	N.P.	.....	.....	7	4½	12	4⅛	11	3
2½	2	300	2	2	2	Salt Creek Consolidated	(sh)	1,286,300	$10	10eQ	1- 2-30	8	5¼	7¼	5½	5⅜	1⅞
15¼	10	200	13	12⅞	13	Salt Creek Producers	(sh)	1,496,859	$10	50eQ	2- 1-30	35½	27¼	35	23⅛	25⅞	9
1	½	100	¾	¾	¾	Savoy Oil		$750,000	$5	.....	.....	7	1¼	3½	1	2½	3/16
No sales.						Transcontinental pfd.		.....	.....	.....	.....	..	..	..	..	..	..
4½	2¼	3,900	3	2⅞	3	Venezuelan Petroleum	(sh)	755,090	$5	5eQ	11-15-29	7⅜	4¼	9⅛	4¾	6½	1⅜
4¾	2	100	3⅞	3⅞	3⅞	Woodley Petroleum		$500,000	$1	.....	.....	7	4⅜	8¼	4⅞	9½	2
2½	½	300	1⅝	1½	1½	Y Oil & Gas (new)		$100,000	N.P.	.....	.....	6	1¾	8⅜	2⅛	2⅞	¼

*Including one-half per cent monthly in stock. †Payable monthly and a monthly stock dividend of one-half per cent

STANDARD OIL STOCKS ON NEW YORK CURB

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

1930 High	1930 Low	Week ended May 7 Sales	Week ended May 7 High	Week ended May 7 Low	Week ended May 7 Close	Stocks—		Outstanding capital	Par value	Div. rate	Last paid	1927 High	1927 Low	1928 High	1928 Low	1929 High	1929 Low
18⅛	12¼	300	18¼	18	18¼	Anglo-American Oil (vot. C.O.D.)	.....	£4,192,635	£1	.36 3/16	11-27-29	21⅝	17⅞	22⅜	14⅞	17	11
1	½	200	⅞	¾	¾	Atlantic Lobos	.....	.....	.....	.....	.....	..	..	..	..	..	..
25	23	100	24⅜	23	24¾	Borne Scrymser	.....	$1,000,000	$25	$1SA	10-15-29	69	50	56½	44½	46½	25
60	57	200	58¼	57	57	Buckeye Pipe Line	.....	$10,000,000	$50	$1Q	12-14-29	60	45	76	53	74¼	55
184⅞	155	300	175	175	175	Chesebrough Mfg.	.....	$3,000,000	$25	$1Q*	12-30-29	126	76½	161	117	210	130
17⅜	12⅛	200	15¼	15¼	15¼	Continental Oil	.....	$36,057,840	$10	.....	12-15-27	22⅝	16¼	23	16	29	10
65¾	40½	100	61	61	61	Cumberland Pipe Line	.....	$1,500,000	$50	$1Q	12-15-29	137	89	114	67	75¾	40
54⅜	43	100	44	44	44	Eureka Pipe Line	.....	$5,000,000	$100	$1Q	11- 1-29	68½	47	88	64¼	70½	42
5¼	2½	1,200	5	4⅞	5	Galena Signal Oil, ctfs. of dep.	.....	$16,000,000	$100	.....	.....	13½	3½	13	4¼	6½	3
119	103	3,400	103½	102	102	Humble Oil & Refining	.....	$74,103,300	$25	50eQ	1 1-30	68½	54	114¾	59¼	128	74⅛
311	305	50	307	307	307	Illinois Pipe Line	.....	$20,000,000	$100	$10SA	12-16-29	182	123¾	290½	176½	340½	260
30	22⅛	600	25⅜	24¾	24¾	Imperial Oil Co., Ltd.	(sh)	26,421,768	N.P.	12½eQ	12- 2-29	64⅜	37¾	104	56¾	41	22
41	37	100	37	37	37	Indiana Pipe Line	.....	$3,000,000	$10	50eQ‡	2-15-30	94½	61	91⅞	74⅜	41⅞	26
24	17⅞	1,800	21½	21	21	International Pet.	(sh)	14,247,088	N.P.	12½eQ	12-16-29	29	28¼	55	35	30⅜	15
22⅜	18⅜	200	18⅜	18⅜	18⅜	National Transit	.....	$6,362,500	$12.50	25cQ‡	12-16-29	24	13½	32⅜	19⅜	25⅛	10½
18¼	14	200	16½	16	16½	New York Transit (new)	.....	$1,000,000	$10	40eQ†	1-15-30	44½	31¼	75	38½	17½	10
54	37	100	37	37	37	Northern Pipe Line‖	.....	$2,000,000	$50	$2SA	1- 2-30	100	70	69	56½	63	41
74⅞	66⅛	300	73⅜	72¾	72¾	Ohio Oil	.....	$60,000,000	$25	50cQ‡	12-14-29	67⅞	52	84	58½	79⅞	64⅛
32	20	100	24	24	24	Penn Mex. Fuel	.....	$10,000,000	$25	50cQ	12-14-29	39	12	84	28	44½	20
33	21⅜	200	22	22	22	Solar Refining	.....	$4,000,000	$25	$1.25SA	12-20-29	..	..	..	..	50	29
20⅛	13	200	20⅛	20⅛	20⅛	Southern Pipe Line	.....	$1,000,000	$10	50eQ	.....	27¼	15½	19	15	22½	13
45⅞	37½	200	40	40	40	South Penn Oil (new)	.....	$30,000,000	$25	50eQ	12-30-29	41½	35	71⅞	36¾	60¼	35⅛
64	50	50	51	51	51	Southwest Pa. Pipe Lines	.....	$1,750,000	$50	$1Q	10- 1-29	83	55½	102	70	70	60
59⅞	49⅞	4,600	54⅞	54	54½	Standard Oil of Indiana	.....	$348,175,069	$25	62½eQ‡	12-16-29	81½	64⅜	95⅞	70⅞	63	45
40½	33¼	1,500	36⅝	36	36	Standard Oil of Kentucky	.....	$25,654,516	$10	40eQ	12-16-29	130	111½	179¾	122¼	46⅞	29
48⅞	44¼	200	48½	48	48	Standard Oil of Nebraska	.....	$4,649,225	$25	62½eQ‡	12-20-29	49½	40	54⅞	39⅞	50¼	40
108½	81	100	94	94	94	Standard Oil of Ohio	.....	$14,000,000	$25	62½eQ	1- 2-30	87½	72	134	71	129	60
10	8	50	8	8	8	Swan-Finch Co.‖	.....	$861,466	$25	.....	12- 2-29	21	14½	23½	16	18	10
97⅞	85⅞	1,700	92⅛	89½	89⅞	Vacuum Oil Co.	.....	$126,180,350	$25	$1Q	12-20-29	..	..	111	72	133¾	75

*Plus 50 cents extra. †Plus 10 cents extra. ‡Plus 25 cents extra. ‖Bid and ask.

USE OF MAGNETOMETER IN SOUTH TEXAS AREA

(Continued from Page 42)

warrant the effort. The question of speed is of very least importance, in fact speed in setting up, leveling and reading will be found more detrimental to accurate work than will be offset by quick completion of the work to cut down cost.

It will also be found necessary to check and recheck any station showing any abrupt change in intensity. These checks should preferably be made on a different day and at a different hour in order to insure corrections for diurnal variation and temperature.

It will also be found desirable to adjust the sensitivity of the magnetometer to correspond with the small anomalies that are being sought. In most of the work in this area it was found advisable to adjust the scale value or scale constant of the magnetometer to approximately 15 gamma per scale division. In this way the small errors in estimated fractions of a scale deflection can be still more reduced.

Locating and Outlining Serpentine Plugs

Because of the igneous nature of Serpentine it was the general impression that the magnetometer should be very useful in locating buried Serpentine plugs or deposits. Offhand the opinion was also ventured that a Serpentine plug would manifest itself by large anomalies in the magnetic field distribution. With these preconceived ideas about the subject it is therefore not difficult to understand the statement made by some oil operators that the magnetometer failed to indicate the Serpentine plugs at Lytton Springs, Dale and Thrall. If the work had been done with the proper degree of accuracy it would seem that these fields should have been outlined not as a large anomaly but one of 50 or 60 gamma.

As a part of this paper there are shown several illustrative examples of magnetometer surveys made on the type of structure usually sought for in the South Texas counties.

Serpentine Plugs

Yoast Plug

Plate 1 shows the magnetometer survey made over the so-called "Yoast Field" located near Cedar Creek in Bastrop County. As it is not the policy of The Oil and Gas Journal to lend itself to promotion schemes the land lines on the map for an area as yet not fully developed have been omitted, only the final magnetometer map being shown for purposes of discussion and illustration.

In this particular instance the magnetic results indicated a maximum change of only 40 gamma. Sufficient readings were taken to definitely outline the structure as shown. The map shows that in a distance of a mile the difference in vertical intensity was only 40 gamma. However, a change of even 40 gamma in an area otherwise lacking of any magnetic variation would indicate an unusual subsurface condition, which in this particular area has been proven by drilling operations to be a Serpentine plug.

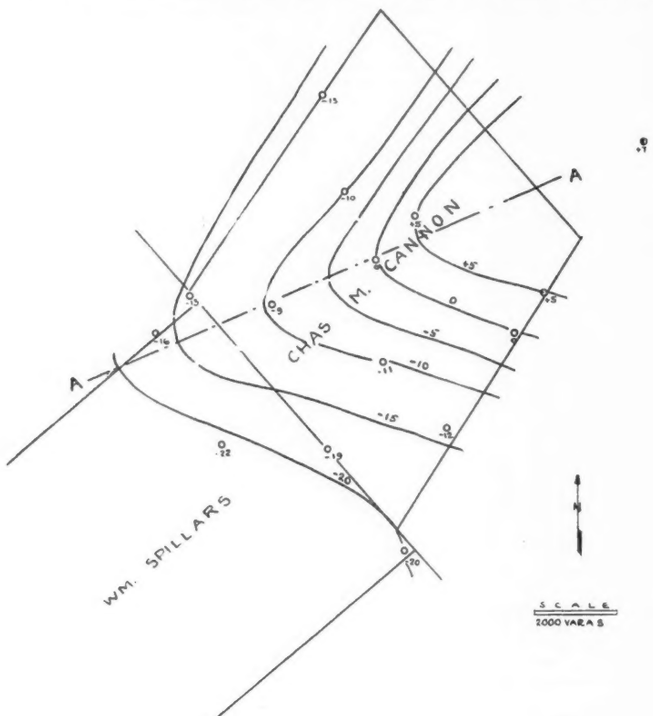


Plate 4—Magnetometer survey over the Buchanan Field near Dale, Caldwell County, Texas. The line AA represents the axis of the magnetometer high and from subsurface information available this line coincides with the subsurface fault.

Dale Field

As a second illustration of a magnetometer survey there is shown on Plate 2 a vertical intensity map of the area known as the Dale Field (Caldwell County). Here again we find a change of about 40 to 60 gamma in a mile with a definitely defined closed high. This also has of course been proven by drilling operations to be a Serpentine plug.

Ellstone Structure

As a third illustration of a magnetometer survey over a Serpentine plug there is shown on Plate 3 a magnetometer map of the so-called Ellstone structure in Medina County, Texas. In this particular instance the total change amounts to over 140 gamma in a distance of three-fourths mile. Here again there is outline a closed magnetic high and though not located exactly as represented by the surface structure described as the Ellstone structure in the Texas State bulletin of Medina County it is nevertheless so close to that surface structure that it can be considered as the subsurface condition that produces the surface structure known as the Ellstone structure. A well drilled close by encountered the Serpentine at about 700 feet and so it can be considered that the magnetometer has actually defined a Serpentine plug the top of which lies probably 600 to 700 feet below the surface.

It is interesting to note in that case the total change in intensity is considerably greater than over the Dale and Yoast Fields. However, it should also be remembered that in the Yoast and Dale Fields the Serpentine lies about 2,000 feet below the surface while on this, the Ellstone structure, the Serpentine is about 600-700 feet deep.

Buchanan Field

(Near Dale in Caldwell County)

Plate 4 shows the magnetometer results obtained on the so-called Buchanan Field near the town of Dale in Caldwell County. This particular investigation holds possibly a very important clue in the interpretation work for magnetometer surveys. For those particularly interested it is the desire of the writer to call attention to the fact that numerous wells have been drilled on this particular structure and from the subsurface information obtainable from the well logs it is definitely established that a fault of 300 to 350 feet displacement exists.

Now comparing a subsurface structure map with the magnetometer survey here presented it is very interesting to note that a distinct high is outlined (see discussion of high and low trends given in The Oil and Gas Journal December 20, 1928, Page 25). The most important fact however is that the axis of this high trend line AA coincides almost exactly with the subsurface fault as indicated by the well log data.

Only a few of the stations are indicated on the map and the contour interval is only 5 gamma. Although Serpentine is found in considerable thickness at about 1,800 feet or so, yet the magnetometer survey does not show this to be a closed high as is found on the three other Serpentine plugs already presented.

Darst Creek Fault

(Guadalupe County, Texas)

Plate 5 shows the magnetometer results obtained across the Darst Creek Fault. These observations were made along the Seguin-Gonzales highway starting at the point where the above highway crosses the west line of the W. M. Arrington Survey and proceeding southeastward towards Gonzales. As indicated the stations were taken at 0.2-mile intervals and the graph plotted to indicate the profile.

Up to a point 0.8 mile (Station E) from the start the readings do not vary much, but starting at Station E the change in intensity is abruptly increasing, reaching a maximum at approximately the point where Dillworth Hager indicates the surface fault, Station H. In other words the profile can be interpreted as indicating the downthrow side of that formation by which the magnetometer readings are influenced to occur at Station E. This point is approximately 3,100 feet west of the surface fault.

Second Fault Illustration

Plate 6 shows the magnetometer results obtained when crossing a surface fault indication in Gonzales County, Texas. Here the surface fault exposures occur between Stations F and G while about 0.7 mile (Station J) northwest from the surface fault there occurs a sharp break in the profile. This Station J may indicate again the break in the

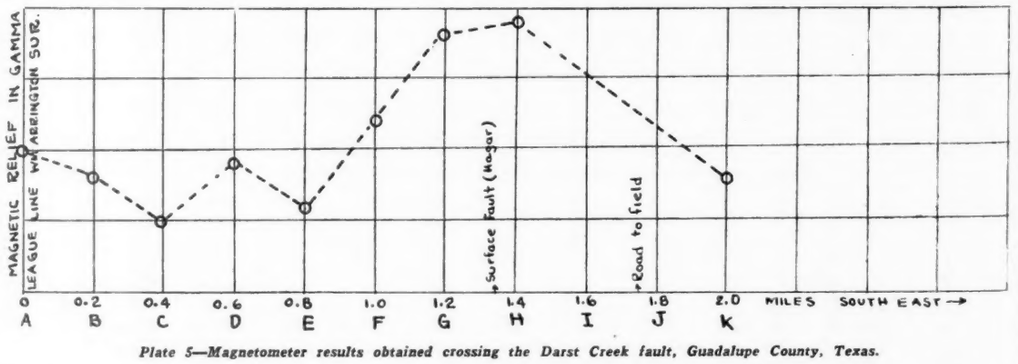

MAGNETIC RELIEF IN GAMMA
LEAGUE LINE W. ARRINGTON SUR.
Surface Fault (Hagar)
Road to field
0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 MILES SOUTH EAST
A B C D E F G H I J K

Plate 5—Magnetometer results obtained crossing the Darst Creek fault, Guadalupe County, Texas.

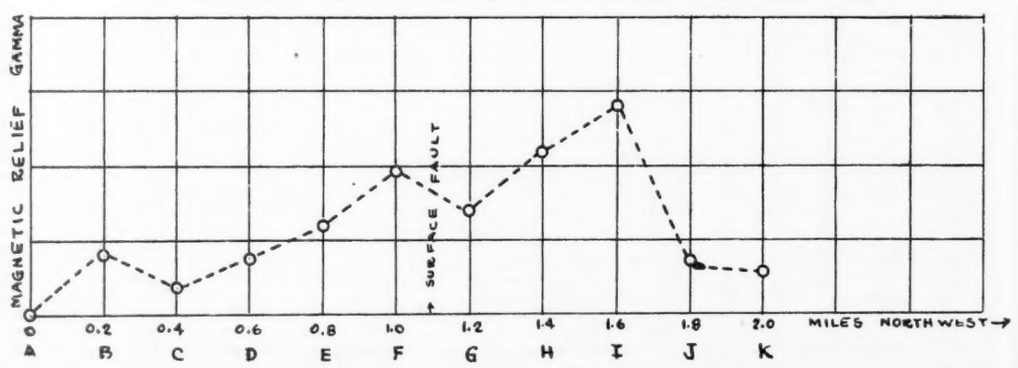


Plate 6—Magnetometer results obtained on a fault in Gonzales County, Texas.

subsurface formation which causes the reaction on the magnetometer.

Conclusion

It is hoped that the few examples cited in this paper will clearly and effectively point out to the reader the following facts: First, that the magnetometer can be used to advantage in outlining Serpentine plugs; second, that the magnetometer has some value, depending on accuracy, for fault survey work; third, that if readings are taken with a high degree of accuracy the contour interval can be taken at 5 or 10 gamma and in such a case as illustrated in Figure 5 a map contoured on a 5 gamma interval actually reveals structural conditions which otherwise would have been passed over with the magnetometer.

In conclusion it should be impressed that the magnetometer work in South Texas is a matter of accuracy, requiring considerable foot work and Brunton surveying.

SPOT MARKET CONTINUES DULL IN OKLAHOMA

(Continued from Page 36)

season the refiners are assured a steady increase in demand.

Crude Situation

In the light of the past developments many market observers believe that the trade should wait until June 1 to 15 before making pessimistic predictions regarding the outlook for the gasoline market over the next few months. Much will depend on the sucess of the plans to continue the curtailment of crude oil production in flush fields in California and the Mid-Continent. The matter of extending present curtailment programs through the summer months to prevent an oversupply of crude oil wil come up for final action in the near future. If a sound situation in regard to crude oil supply and demand can be continued such as has obtained over the past 60 to 90 days most observers are confident that refiners will be able to secure profitable tank car prices for their gasoline through the main gasoline consuming season.

Gasoline and Naphtha

In their anxiety to secure spot business a few sellers have quoted low prices on gasoline over the remainder of the month in cases where the buyers were in a position to order out several cars immediately. Considerable U. S. Motor gasoline has been sold over the month at 7 cents and spot sales have been made as low as 6¾ cents. Oklahoma refiners reported competitive sales in other territories as low as 6¾ cents basis Group 3 for May delivery.

Most of the larger refiners in Oklahoma continue firm in their quotation of 7½ cents to the trade on the U. S. Motor gasoline. Due to weather conditions some of the jobbers have been slow in ordering out material which is based on this 7½-cent published price. The fact that spot material is available at lower prices may also be a factor in the situation. One large refiner, however, in checking his company's contract movement with April and May of last year, states that conditions are normal this year with a satisfactory increase in shipments.

Few spot sales of the higher gravity gasolines are reported with the same wide spreads in quotations that prevail in the U. S. Motor grade. The naphtha market is easier and lower priced material was available the first of the year.

Natural Gasoline

The natural gasoline market, which has been firmer than the refinery market, was unsettled on Monday and Tuesday. Two manufacturers who have been among the larger buyers were not so active and more material has been offered on the spot market. The A and AA grades were unchanged at 6½ cents, but the remaining grades were available at 6¼ cents, which is one-fourth cent decline from the prices in effect the previous two weeks.

Kerosene

The largest buyer of kerosene during the week was a Kansas refiner who is reported to have purchased several hundred cars for May delivery. The bulk of this business was placed with Oklahoma and Kansas buyers. Prices paid for this material varied dependent on freight rates.

As previously explained, the kerosene market generally is weak. The spring business of several large refiners was much below expectations and they have entered the dull consuming period with material in storage. The low flash specification 41-43 was freely available at 4⅛ to 4¼ cents with sales over the month at 4 cents. The higher gravities were also weak.

Distillate and Gas Oil

The better grades of distillate and gas oil are not so freely offered as they were the latter part of April and early May. Some of the refiners have quit making distillate and spot buyers are not having large quantities offered them. This is particularly true of the better grades of 38-40 and 36-38 straw color grades. Some sales for storage are being made, buyers apparently feeling that present prices are as low as they will go this year.

Although the gas oil market is considered weak, buyers find very little material of good quality available in Oklahoma. Some shipments not meeting U.G.I. specifications have been sold at 2¼ cents or less, but the better grades of 32-36 gas oil for cracking or furnace oil are in a better position with a price range up to 2¾ cents.

Fuel Oil

The general situation in regard to gas oil has already been explained. High cold test, low gravity fuel oil sold in North Texas last week as low as 40 cents, with plenty of similar material available at 50 cents. Oklahoma sellers who have a freight rate advantage in shipments to northern industrial buyers have not been forced to sell on an equal basis, but sales of low gravity industrial fuel have been made as low as 52½ cents.

The higher gravities are firmer. One refiner who usually has large quantities of high gravity fuel oil is reported to have withdrawn from the market and will store until such time as prices improve.

Lubricants and Wax

The market on lubricants, including neutral oils, bright stocks and steam refined stocks, varies with each refiner. Some are sold up for May on all grades, while others have excess material on hand. Prices vary depending on specifications, but on the whole, quotations were unchanged over the week.

Domestic sales of 124-126 wax are being made over a price range of 2⅛ to 2⅜ cents. Exporters are reported to be offering 2.38 to 2.40 cents at Gulf Coast points for the same grade. This would net Oklahoma refiners about 2.15 cents. Some business has been placed at that figure.

OIL OUTLOOK IS DISTINCTLY FAVORABLE

(Continued from Page 137)

$208,100 of Conte Costa Power Co. Additions and betterments aggregating $1,558,055 already have been made and company proposes extensions of $1,224,395, which issue is proposed to finance.

Salrin Chosen Director

At the annual meeting of the stockholders of Tide Water Oil Co. retiring directors were re-elected excepting that E. H. Salrin was elected to fill the vacancy occasioned by the retirement of J. B. Deacon.

Darby Petroleum

Stockholders of the Darby Petroleum Co. will meet on May 26 to pass upon a proposition to reduce the authorized capital stock of the company from 1,250,000 no-par common shares to 750,000 shares and to exchange the new stock for the present on a basis of one of new for two of the present shares.

Phillips Petroleum

Frank Phillips, president of the Phillips Petroleum Co., has addressed a letter to the stockholders stating that: "Under authority of a resolution of the board of directors 675,709 shares of the authorized but heretofore unissued capital stock of the company are offered for subscription on or before June 16, 1930, to stockholders of record at the close of business May 15, 1930, on the basis of one share for each four shares of stock registered in their names on that date at $32 per share. This new stock will not be delivered until after June 11, 1930, and will not participate in the dividend which will be paid June 30, 1930.

The purpose of the issue is to reimburse the treasury in part for capital expenditures and to provide additional funds for the company's program of extending its activities in the manufacturing, transporting, marketing, gas and utilities divisions.

Mexican Seaboard

Report of Mexican Seaboard Oil Co. and subsidiaries, including Cia Internacional de Petroleo y Oleoductus, S. A., for year ended December 31, 1929, shows combined net loss of $28,850 after interest, depreciation, drilling expenditures written off and depletion of active leases, etc. In 1928 the company reported net loss of $1,332,906, excluding net loss of $42,594 reported by Cia Internacional de Petroleo y Oleoductos, S. A.

PERFECT METHOD OF DETECTING LOSSES

(Continued from Page 129)

sions, of its height and a gauge pole is permanently set. A recording gauge instrument and proper thermometers are attached. It will be necessary in some instances to make also a connection for application of gas pressure to the chamber.

Interpretation of Results

Operation and interpretation of results are carried on in two ways. Systematic, periodical checks are made of dead line conditions. After pumping the line up to normal or higher pressures than those prevailing with the line in operation, connection from the line is opened to the chamber. A liquid level is adjusted to a point suitably near its top, the pump is stopped and both ends of the line, encompassing the chamber but not the pump, are closed. In this case of procedure, the indication of loss of gauged fluid in the chamber tells the tale over any time period of observation, and this is all that is necessary. No further elaboration is needed to the mind of the trained operator.

Check During Operation

The other, equally important and interpretive observation is made during operation of the line. The chart from the recording gauge gives such a clear line of comparisons that they soon become indicative of any irregularities by comparison of prevailing pressures against observed time rates of delivery through the line. When these pressures vary from the normal or when under static conditions of test, losses are indicated from the line volume, search is made of the line, and invariably the leakage losses are located and may be stopped.

So positive and trustworthy are the indications that theft losses from tapping of the line stand out with exceptional emphasis on the charts, and they record, of course, the exact times at which the thefts take place.

Normal, permissible losses are recognized. Any deviation from these, and only such deviation, calls out the line walker. The equipment is not expensive, and its operation is simple and within the easy grasp of any plant man.

NATIONAL SCOUTS MEETING

SAN ANTONIO, Tex., May 12.—Final preparations are being made for the National Oil Scouts Association of America convention which meets in San Antonio May 19 and 20 when approximately the majority of the 1,000 members will be guests of the Southwest Texas Oil Scouts and Land Men's Association. Elaborate plans and preparations have been made by the local association, which is affiliated with the national body, for golf tournament, dance, and a barbecue to be held near Seguin.

EQUIPMENT MEN URGED TO BE EXPORT MINDED

By H. H. Clark
Vice President and Sales Manager of the Baash-Ross Tool Co.

The oil equipment manufacturer today, who expects to substantially increase his yearly sales volume, must become "export minded."

It was but a few years ago when an inquiry from the foreign fields was considered in the light of a curiosity and orders were filled only after considerable work in obtaining details on tariffs, taxes, dutiable shipping weights, shipping routes and many other details. This scanty information plus a hazy general impression of the location of this country and general facts of the drilling conditions was practically all of the information any oil equipment manufacturer had concerning the foreign fields.

Today, manufacturers, if they have been alert, have received from the oil publications alone a detailed picture of the actual drilling conditions abroad and hundreds of other bits of information to guide them in exploiting this great potential market. These articles have not only served the oil field equipment manufacturer for future sales work, but also have been very helpful to the engineering departments in their development work to design devices that will function under the stresses of conditions peculiar to the foreign fields. In the early days of manufacturing, tools were designed to take care of drilling conditions found in the local fields, and if other fields were exploited the manufacturer made observation of drilling conditions and redesigned tools to fit these conditions. But today, in exploiting the foreign fields the majority of oil field equipment manufacturers must depend on the articles published by the oil publications to get all the available information on drilling conditions so vital to successful manufacturing for this market. Such information on drilling structures, native help problems, repair shop facilities, transportation problems and many other conditions have a direct bearing on future sales and engineering problems.

The Oil and Gas Journal and other oil magazines by their splendid articles on foreign field activities have been the prime movers in stimulating the oil field equipment manufacturers to obtain export business. From such sources first-hand information can be collected and assembled and should be filed for future reference by the various departments, such as sales, engineering, credit and transportation departments.

It is no secret that the concerns that have taken advantage of the export business have figured their sales quota today to include a tremendous gain in export sales and consider it one of the most important ways of showing a sales gain for the coming year.

The Baash-Ross Tool Co. to better serve its foreign customers found it necessary to open export headquarters in New York City at 30 Church street under T. E. Ward, who has had years of export experience. Many other companies have also opened their own offices in New York City or made connections with export sales agencies, which attests to the importance these concerns place on the future export business.

The easiest and the most productive way in reaching the foreign operators is through the oil publications. All of the publications have made continuous drives for foreign readers and have a very complete coverage.

In mailing out your literature to foreign fields it is well to remember to cover the fields which are going to be opened in the future as well as covering the major fields. When competition becomes keener in the foreign marts, the manufacturer who has pioneered the new fields with his literature is bound to receive the first shot of business.

With the English, Canadian, German and other foreign manufacturers making heavy inroads in this foreign market, it behooves the American manufacturer to adopt a vigorous and active sales plan if he is to obtain his share of this business.

TWELVE-MONTH PRODUCTION TOTAL IS STEADILY ON THE DOWN GRADE

By James McIntyre

It is estimated that the production for the 12 months ending April 30 was 994,690,000 bbls. This indicates that the oil industry is steadily emerging from the woods of overproduction. The production for the calendar year 1929 was 1,004,266,723 bbls. For the 12 months ending January 31 it was 1,003,564,079 bbls. and for the 12 months ending February 28, 1,002,920,661 bbls. In the 12 months ending March 31 production fell below the billion barrel mark. It totaled 998,755,544 bbls. and in the 12 months ending in April it is estimated that the total crude output of the United States was 994,690,433 bbls. The last named figure is subject to revision, when the official figures are available later in the month.

This steady decrease in 12-month production is very encouraging. It will be necessary to continue the cumulative decline curve to insure prosperity in the producing division of the oil business this year.

If the production average maintained in April is continued through the best consumption months it should assure an adequate price for oil, get rid of a lot of crude and refined stocks, and clear the decks for a fall and winter of prosperous business.

The thing to avoid is that tremendous upswing which began in the middle of last May and continued to a peak of 2,980,000 bbls. per day in August, when to avoid utter demoralization producers began to curtail and production was brought down, not to requirements, but to a level below what it was when the upswing began.

Following are the details of production by pool in March in all fields between the Mississippi River and California, together with a summary by producing divisions:

Crude Oil Production in the United States in March, 1930

	Daily av. bbls.	Month bbls.
Oklahoma	616,526	19,112,306
California	635,483	19,699,979
Texas	822,679	25,503,080
Kansas	113,045	3,504,395
Arkansas	58,641	1,817,871
Louisiana	62,680	1,943,093
Montana	8,631	267,561
Wyoming	51,215	1,587,665
Colorado	4,654	144,274
New Mexico	10,888	337,528
Eastern fields	136,500	4,231,500
Total March	2,520,942	78,149,252
Total February	2,653,517	74,298,410
Difference	132,575	3,850,842

MID-CONTINENT FIELDS

	Daily av. bbls.	Month bbls.
Kansas	113,045	3,504,395
Oklahoma	616,526	19,112,306
North Texas	92,277	2,860,587
Central Texas	40,442	1,253,702
West Texas	335,892	10,412,647
East Central Texas	26,251	813,797
Panhandle Texas	88,741	2,750,971
North Louisiana	41,015	1,271,465
Arkansas	58,641	1,817,871
Total March	1,412,830	43,797,741
Total February	1,434,696	40,171,426
Difference	21,866	3,626,315

GULF COAST AND SOUTHWEST TEXAS

	Daily av. bbls.	Month bbls.
Gulf Coast	196,148	6,105,420
Southwest Texas	63,793	1,977,584
Total March	259,941	8,083,004
Total February	265,477	7,433,340
Difference	5,536	649,664

OKLAHOMA

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Washington County	5,169	160,239
Nowata County	5,429	168,299
Rogers County	2,055	63,705
Osage and eastern Kay Counties:		
Burbank	16,245	503,595
Osage, outside Burbank	22,934	710,954
Total	39,179	1,214,549
Tulsa and Wagoner Counties:		
Bird Creek, Owasso, etc.	3,209	99,479
Red Fork, Sand Springs, Turkey Mt., Bruner	1,133	35,123
Bixby, Leonard	866	26,846
Broken Arrow, Coweta	933	28,923
Total	6,141	190,371
Tulsa, Okmulgee and Muskogee Counties:		
Okmulgee and Beggs	2,423	75,113
Mounds	1,533	47,523
Bald Hill and Haskell	2,317	71,827
Morris, Boynton, Cole	1,914	59,334
Total	8,187	253,797
Okmulgee, Okfuskee, Seminole, Hughes and Pottawatomie Counties:		
Seminole City	19,983	619,473
East Seminole	3,462	107,322
Bowlegs	20,149	624,619
Little River	56,804	1,760,924
Earlsboro	36,212	1,122,572
East Earlsboro	39,600	1,227,600
Searight	9,634	298,654
Mission	12,381	383,811
Carr City	9,785	303,335
Maud	5,893	182,683
Total Seminole Field	213,903	6,630,993
Allen	19,092	591,852
Konawa	8,395	260,245
Asher	2,301	71,331
Pearson-St. Louis	41,084	1,273,604
Sasakwa	11,058	342,798
Beebe	2,625	81,375
Henryetta-Deaner-Lyons, etc.	6,903	213,993
Wewoka	3,760	116,560
Cromwell	7,866	243,846
Papoose-Gilcrease	2,943	91,233
Jarvis-Holm	315	9,765
Weleetka	913	28,303
Wetumka	39	1,209
Yeager	401	12,431
Miscellaneous	725	22,475
Total	322,323	9,992,013
Creek and Tulsa Counties:		
Glen Pool, Jenks, Kiefer	6,609	204,879
Sapulpa and Fisher	562	17,422
Cushing, Shamrock	14,045	435,395
Bristow, Kellyville Depew	13,633	422,623
Pickett Prairie and North Bristow	1,665	51,615
Eastern Bristow or Slick	4,950	153,450
Total	41,464	1,285,384
Pawnee County:		
Cleveland	2,824	87,544
Keystone	1,585	49,135
Jennings	2,124	65,844
Otoe	518	16,058
Ralston-Masham	219	6,789
Total	7,270	225,370
Payne County:		
Yale, Quay, Ingalls	3,907	121,117
North Cushing	3,357	104,067
South Cushing	245	7,595
Mehan-Ripley	2,796	86,676
Total	10,305	319,455
Oklahoma County:		
Oklahoma City	74,344	2,304,664
Lincoln County:		
Stroud	909	28,179
Davenport	1,169	36,239
Kendrick	190	5,890
Total	2,268	70,308
Kay, Grant and Noble Counties:		
Blackwell	958	29,698
Vernon	719	22,289
Otstot	887	27,497
Deer Creek	697	21,607
Ponca City	660	20,460
Mervine	259	8,029
Braman	3,471	107,601
Hubbard	1,619	50,189
Thomas	687	21,297
Garrett	23	713
Tonkawa	7,652	237,212
Billings	129	3,999
Miscellaneous	1,585	49,135
Total	19,346	599,726
Garfield County:		
Garber	4,762	147,622
Logan County:		
Lovel	615	19,065
Marshall	7,621	236,251
Total	8,236	255,316
Carter County:		
Healdton	11,973	371,363
Hewitt	7,199	223,169
Graham	2,580	79,980
Brock	561	17,391
Fox	2,226	69,006
Sholom Alechem	13,902	430,962
Total	38,441	1,191,671
Stephens and Colton Counties:		
Loco-Milroy	1,599	49,569
Comanche	1,512	46,872
Duncan	4,285	132,835
Walters	2,186	67,766
Kilgore	343	10,633
Total	9,925	307,675
Jefferson County:		
Hambro, etc.	2,417	74,927
6s-6w	173	5,363
Total	2,590	80,290
Caddo County:		
Cement	3,008	93,248
Garvin County:		
Robberson	2,349	72,819
Grady County:		
Knox	2,991	92,721
Beckham County:		
Sayre	24	744
Marshall County:		
Madill	820	25,420
Total March	616,526	19,112,306
Total February	642,058	17,977,624
Difference	25,532	1,135,682

KANSAS

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Sedgwick County:		
Wright	17,208	533,448
Greenwich	3,020	93,620
Robbins	403	12,493
Miscellaneous	1,039	32,209
Total	21,670	671,770
Marion County:		
Florence-Urschel	472	14,632
Peabody	1,091	33,821
Covert-Sellers	447	13,857
Lost Springs	666	20,646
Davis	823	25,513
Total	3,499	108,469
Butler County:		
Elbing	2,013	62,403
Potwin	499	15,469
Cameron-Robinson	594	18,414
Wilson Dunkle	1,550	48,050
Towanda	1,771	54,901
Fox-Bush	938	29,078
Nuttle-Koogler	3,025	93,775
Eldorado	6,804	210,924
Smock	210	6,510
Leon-Weaver	4,702	145,762
North Augusta	858	26,598
South Augusta	1,182	36,642
Sluss	225	6,975
Douglass	105	3,255
Keighly	303	9,393
Benton	51	1,581
Blankenship	852	26,412
Total	25,682	796,142
Greenwood and Woodson Counties:		
Sallyards	1,097	34,007
Teeter-Pixley-Scott	3,952	122,512
Virgil	5,482	169,942
Thrall-Burkett	1,182	36,642
Seeley	7,709	238,979
Polhamus	728	22,568
Miscellaneous	795	24,645
Total	29,945	649,295
Cowley County:		
Rainbow Bend	1,530	47,430
Slick	473	14,663
Graham	235	7,285
Rock	137	4,247
Clark	114	3,534
Eastman	310	9,610
Winfield-New Salem	1,843	57,133
Miscellaneous	812	25,172
Total	5,454	169,074
Other Counties:		
Rooks	59	1,829
Sumner	8,115	251,565
Rice	1,431	44,361
Russell	3,729	115,599
Reno	24	744
McPherson	10,070	312,170
Harvey	10	310
Trego	20	620
Coffey	279	8,649
Chautauqua	3,402	105,462
Elk	1,767	54,777
Wilson	157	4,867
Montgomery	1,202	37,262
Allen	397	12,307
Neosho	488	15,128
Lyon	756	23,436
Miami	761	23,591
Franklin	256	7,936
Douglas	12	372
Bourbon	47	1,457
Linn	121	3,751
Anderson	1,750	54,250
Labette	26	806
Chase	13	403
Woodson	903	27,993
Total March	113,045	3,504,395
Total February	105,918	2,965,704
Difference	7,127	538,691

NORTH TEXAS

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Burkburnett	9,197	285,107
Electra	11,494	356,314
Iowa Park-K-M-A	4,816	149,296
Archer County	18,012	558,372
Clay County	758	23,498
Wilbarger County	24,841	770,071
Montague County	6,462	200,322
Young County	11,352	351,912
Baylor County	1,037	32,147
Cooke County	4,057	125,767
Foard County	251	7,781
Total March	92,277	2,860,587
Total February	91,564	2,563,792
Difference	713	296,795

CENTRAL TEXAS

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Runnells	17	527
Coleman	4,972	154,132
Comanche	160	4,960
Stephens	6,062	187,922
Eastland	4,977	154,287
Brown	6,904	214,024
Callahan	3,524	109,244
Throckmorton	1,158	35,898
Jack	4,146	128,526
Haskell	55	1,705
Palo Pinto	642	19,902
Shackelford	6,262	194,122
Jones	1,322	40,982
Erath	241	7,471
Total March	40,442	1,253,702
Total February	42,779	1,197,784
Difference	2,335	55,918

WEST TEXAS

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Field and County—		
Bennett, Ward	149	4,608
Big Lake, Reagan	16,300	505,309
Chalk-Settles, Glasscock and Howard	38,651	1,198,195
Church-Fields, Crane	22,130	686,027
Hendricks, Winkler	87,194	2,703,913
McCamey-Taylor, Upton-Crane	10,485	325,044
McElroy, Crane	14,122	437,781
Skelly, Reagan	156	4,797
Ira, Scurry	20	624
Powell, Crockett	1,627	50,449
Yates, Crockett	372	11,517
Stephens, Fisher	1,031	31,956
Waddell, Crane	33	1,022
Westbrook-Iatan, Mitchell	2,078	64,405
Wheat, Loving	1,263	39,141
Yates, Pecos	128,390	3,980,076
Hazlett, Ward	434	13,457
O'Brien-Hutchings, Ward	940	29,139
Grand Falls, Ward	70	2,181
Mertson, Irion	.....	.....
Pecos Valley, Pecos	127	3,928
Penn, Ector	4,004	124,121
Taylor-Link, Pecos	5,235	162,296
Taylor, Taylor	115	3,650
Phillips-Pryor, Pecos	.....	.....
Toborg, Pecos	965	29,926
Total March	335,892	10,412,647
Total February	341,938	9,574,215
Difference	6,046	838,432

EAST CENTRAL TEXAS

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Boggy Creek	3,503	108,590
Cedar Creek	49	1,538
Currie	372	11,529
Hill County	45	1,395
Mexia	4,202	130,275
Minerva	484	14,996
Nigger Creek	194	6,006
Powell	5,883	182,377
Richland	239	7,426
Thrall	73	2,270
Van	10,322	319,990
Wortham	885	27,425
Total March	26,251	813,797
Total Febuary	24,230	678,456
Difference	2,021	135,342

TEXAS PANHANDLE

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Hutchinson	22,508	697,748
Carson	9,779	303,149
Gray	55,397	1,717,307
Moore	554	17,174
Wheeler	503	15,593
Total March	88,741	2,750,971
Total February	88,110	2,467,080
Difference	631	283,891

SOUTHWEST TEXAS

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Branyon	20	637
Buchanan	94	2,913
Bruner	23,773	736,953
Dale	368	11,408
Darst Creek	16,333	506,328
Kingsville	127	3,926
Larremore	102	3,152
Luling	9,727	301,547
Lytton Springs	855	26,519
Manford	627	19,435
McMullen County	36	1,120
Medina County	22	682
Mirando	8,425	261,167
Pettus	667	20,664
Somerset	1,590	49,295
Star	16	494
Taylor	253	7,858
Yoast	758	23,486
Total March	63,793	1,977,584
Total February	64,782	1,813,895
Difference	989	163,689

GULF COAST SOUTHEAST TEXAS

Daily Average and Monthly Production in March

	Daily av. bbls.	Month bbls.
Allen	73	2,249
Barbers Hill	26,296	815,165
Batson	1,212	37,584
Big Creek	2,956	91,625
Blue Ridge	1,916	59,390
Brenham	121	3,742
Boling	346	10,724
Clay Creek	1,566	48,546
Damon Mound	546	16,937
DeWalt	10,533	326,511
Fannette	1,271	39,406
Goose Creek	4,473	138,682
Hankamer	56	1,730
High Island	929	28,795
Hull	8,310	257,618
Humble	14,905	462,060
Jasper County	25	775
Lost Lake	699	21,666
Markham	267	8,290
Nash	306	9,487
North Dayton	740	22,938
Orange	2,821	87,456
Orchard	1,506	46,696
Pierce Junction	10,860	336,659
Port Neches	2,000	62,000
Raccoon Bend	10,277	318,592

	Daily av. bbls.	Month bbls.
Refugio	38,453	1,192,052
Esperson (Sheeks)	1,933	59,935
Saratoga	1,008	31,250
Sour Lake	2,209	68,491
South Liberty	4,743	147,020
Spindletop	16,322	505,970
West Columbia	5,605	173,763
Total March	175,283	5,433,792
Total February	179,266	5,019,416
Difference	3,983	414,376

SOUTH LOUISIANA

Daily Average and Monthly Production in March		
Anse La Bute	36	1,116
Bayou Blue	72	2,238
Bayou Boullion	660	20,447
Black Bayou	87	2,700
Edgerly	480	14,875
Jennings	825	25,581
Hackberry	3,818	118,373
Lake Barre	804	24,911
Lake Pelto	208	6,437
Lockport	2,706	83,882
New Iberia	5	155
Fort Barre	1,693	52,489
Sorrento	90	2,806
Starks	423	13,106
Sulphur	3,443	106,731
Sweet Lake	99	3,072
Vinton	5,726	177,503
Welsh	119	3,691
White Castle	371	11,511
Total March	21,665	671,628
Total February	21,430	600,029
Difference	235	71,599
Total Gulf Coast March	196,948	6,105,420
Total February	200,696	5,619,445
Difference	3,748	485,975

NORTH LOUISIANA

Daily Average and Monthly Production in March		
Caddo, light	10,200	316,200
Caddo, heavy	2,675	82,925
Homer	3,605	111,755
Haynesville	4,590	142,290
DeSoto-Red River	3,065	95,015
Elm Grove	450	13,950
Bellevue	660	20,460
Cotton Valley	2,355	73,005
Urania	5,290	163,990
Sarepta-Carterville	3,270	101,370
Pleasant Hill	715	22,165
Zwolle	4,140	128,340
Total March	41,015	1,271,465
Total February	40,657	1,138,396
Difference	358	132,069

ARKANSAS

Daily Average and Monthly Production in March		
El Dorado	3,995	123,845
Smackover, light	5,310	164,610
Smackover, heavy	41,290	1,279,990
Stephens	925	28,675
Nevada County	1,090	33,790
Lisbon	1,035	32,085
Champagnolle	4,770	147,870
Mount Holly	145	4,495
Bradley	81	2,511
Total March	58,641	1,817,871
Total February	57,442	1,608,376
Difference	1,199	209,495

WYOMING

Daily Average and Monthly Production in March		
Alkali Butte	56	1,736
Big Muddy	1,982	61,442
Dutton	6	186
Oregon Basin	5,193	160,983
Frannie	406	12,586
Elk Basin	682	21,142
Ferris	44	1,364
Grass Creek	1,949	60,419
Hamilton	663	20,553
LaBarge	2,270	70,370
Lance Creek	77	2,387
Lost Soldier	3,152	97,712
Osage	987	30,597
Poison Spider	375	11,625
Rock Creek	2,159	66,929
Rex Lake	35	1,085
Lander	558	17,298
Salt Creek	30,537	946,647
Teapot Dome	36	1,116
Simpson Ridge	48	1,488
Total March	51,215	1,587,665
Total February	50,328	1,409,184
Difference	887	178,481

MONTANA

Daily Average and Monthly Production in March		
Pondera	1,963	60,853
Cat Creek	1,157	35,867
Kevin-Sunburst	5,449	168,919
Lake Basin	62	1,922
Total March	8,631	267,561
Total February	8,336	233,408
Difference	295	34,153

NEW MEXICO

Daily Average and Monthly Production in March		
Artesia	747	23,157
Cap Rock	969	30,039
Lea	4,750	147,256
Hobbs	89	2,759
Jal	1,448	44,888
San Simon	1,026	31,806
Rattlesnake	1,290	39,990
Table Mesa	112	3,472
Hogback	457	14,167
Total March	10,888	337,528
Total February	8,519	238,532
Difference	2,369	98,996

COLORADO

Daily Average and Monthly Production in March		
Craig	993	30,783
Fort Collins	1,504	46,624
Florence	691	21,421
Iles	982	30,442
Tow Creek	409	12,679
Miscellaneous	75	2,325
Total March	4,654	144,274
Total February	5,245	146,860
Difference	591	2,586

VAPOR RECOVERY AND FIRE PREVENTION

(Continued from Page 46)

ability to handle water, gasoline and emulsions at the same time with perfect satisfaction.

In order to protect the compression plant against failure of this equipment a special horizontal line scrubber is installed in the main collection line near the plant. This scrubber is also equipped with a vacuum unloader of the same design.

Compression Plant

The compression plant used for collecting and discharging the waste vapors to the absorption tower consists of three 180-brake horsepower, type XG, direct connected, gas-engine compressors. These machines are designed for compression of vapors from 10 inches mercury of vacuum to 40 pounds per square inch gauge pressure. Each unit is equipped with one adjustable clearance head to facilitate handling variable loads. By means of this device and the number of compression units a constant vacuum can be maintained on the suction side of the compressors.

Another interesting feature of the compression plant is the intake header connection designed to prevent condensation from accumulating in the line connecting the cylinder with the intake header. Vapor is taken from the top side of the header through a 180-degree tube turn and condensation is removed from the lower side of the header as it accumulates. As a safeguard against condensation on the top side of the valves in the suction lines to the compressor cylinders each valve is drilled and tapped above the valve disc. Too much emphasis can not be laid on these particular points since slugs of gasoline or water might seriously damage the compressors in starting.

In addition to these features each unit is equipped with a separate lubricator to feed castor oil to the compressor cylinders. This installation is made necessary due to the condensation of gasoline in the compressor cylinders. Castor oil is not miscible with gasoline and affords a very satisfactory means of lubricating the cylinder walls of compressors handling vapors of high gasoline content.

Absorbers

As previously stated partial removal of the gasoline fractions from the vapors in a recovery system is effected by compression and condensation and the remainder by absorption in oil, redistillation and condensation. Hence, the absorber is probably the most important piece of apparatus in a recovery system.

In the Watson plant every case was exercised in the selection of an absorber which would give maximum yields of the useful gasoline fractions in the wasted vapors.

The tower selected was supplied according to the specifications of the gas department of Richfield Oil Co. It is a 16-plate bubble-cap absorber capable of handling a maximum volume of 5,000,000 cubic feet of gas per day and a maximum oil circulation of 500 gallons per minute at 40 pounds per square inch gauge pressure.

A feature of particular interest in this absorber is the intercooler system for removing the heat of absorption from the absorption oil. In this system, there are five cooling sections located between the first, second, third, fourth, fifth and sixth plates of the absorber. They are known as "U" type "K-fin" cooling sections. They consist of an aluminum tube sheet fitted with "U" shaped aluminum tubes. Each tube is wrapped with an aluminum ribbon at right angles to the tube to form a heat collecting fin. This is made necessary due to the relatively low velocity of the oil across the tube and the frothy condition of the oil. Each section contains 406 square feet of effective cooling surface.

The sections are mounted on blank plates between the bubble plates and may be removed through a rectangular opening on the side of the tower. They are manifolded in parallel and connected to a closed water cooling circuit.

By means of these intercoolers the heat of absorption is removed as it is evolved and a more highly saturated fat oil is obtained. Too much emphasis cannot be placed on this feature since the mean temperature of the oil in an absorber has a very definite effect on the extraction efficiency that can be obtained with a given oil-gas ratio.

Other benefits derived from the use of absorber intercoolers are the saving in the first cost of the oil circulation, distillation and oil cooling facilities and the saving in operating expense.

Pumping and Distillation System

Oil and water circulation for the absorption plant is supplied by means of a triple pump unit. A similar set of pumps direct connected to a steam turbine serves as a standby for the electric unit. Each unit has a capacity of 1,600 gallons of water and 300 gallons of lean oil per minute.

The distillation unit is composed of two heat exchangers, a steam preheater and combination stripper and fractionator.

Vapors from the fractionator are taken to the top of the water cooling tower where they pass through a primary box-type condenser composed of bent tube sections. From the primary condenser the condensate and uncondensed vapors pass into a reflux accumulator. The uncondensed vapor and excess condensate are taken to the final condenser and reflux is withdrawn from the accumulator and dehydrated by means of a water separator located on the ground level. Reflux is discharged over the top of the fractionator by the difference in elevation between the reflux accumulator and the top of the fractionator. This distillation circuit is designed to handle a normal load of 30,000 gallons of gasoline per day and is capable of handling a maximum of 50,000 gallons per day. The endpoint of the finished product is controlled by a Foxboro temperature controller set to maintain the proper temperature at the top of the fractionator.

The lean oil leaving the stripper is forced by the stripper pressure through one heat exchanger and is picked up by the lean oil pump and discharged through the two heat exchangers and Griscom-Russell bent tube cooling sections to the absorber.

Gasoline from the final condenser accumulates in a water separator equipped with liquid level regulators and is discharged to two 4,000-gallon vertical surge tanks. Gasoline from the accumulator scrubber and the final condenser is metered separately. Vapors from the gasoline accumulator and storage tanks are taken through back pressure regulators to the absorber and compression plants respectively.

The stabilizer plant is composed of a 50-plate column, a kettle, a reflux condenser, a reflux accumulator and a heat exchanger. This apparatus was furnished according to the specifications of the gas department of Richfield Oil Co.

Auxiliary equipment for this plant consists of simplex feed pumps, motor driven reflux pumps, motor driven centrifugal water pumps, motor valves, liquid level regulators and instruments and pressure gauges.

The plant differs from the usual installation in that no gasoline cooler is employed to cool the finished gasoline. The heat exchanger is designed to utilize the total amount of heat available in the finished product to heat the feed to the column. Under these conditions the gasoline leaves the heat exchanger at about 80° F. and requires no further cooling.

Control of the operation of the column is obtained by a differential feed controller, a differential reflux controller and a recording top temperature controller. The top temperature is maintained constant by regulating the amount of steam admitted to the kettle. This method of control is made necessary due to the variation in the composition of the feed during the day.

Cooling Tower

The cooling tower employed in this plant is a 14-section "KKC-3" atmospheric cooling tower with a primary box-type condenser located on the top of the tower. Condensation in the primary condenser is secured by passing the entire volume of water, circulated over the tower across and countercurrent to the stream of vapors. Water leaving the weirs of the condenser box passes through a common flume to three cross distributing troughs which feed the water to three lateral distributing troughs. Another feature of interest in this tower is the redistribution system. The water is collected half way down the tower and redistributed by means of cross collectors and redistributing troughs. This feature reduces the windage loss and increases the efficiency of the tower through uniform deck loading.

Bent tube sections are mounted in the "C" or coil section of the tower to cool the gas and oil and to condense the gasoline and recompressor vapors. A collection and redistribution system is used to collect and redistribute the water over the bent tube sections. Each bay of the tower is equipped with easily operated gates to control the volume of water delivered to the cooling sections.

Under normal conditions with a 5-mile wind this tower is capable of cooling 1,600 gallons of water per minute from 88° F. to an average temperature of 70° F., or 5° above wet bulb temperature. Loss of water due to windage is reduced to a minimum through the use of adjustable spray deflectors mounted on the lee side of the tower between the decks.

The overall dimensions of this tower are 28 feet wide by 91 feet long by 55 feet high. It is constructed of select California redwood lumber, brass bolts, copper nails and so designed that no guy wires are necessary.

This plant was erected according to to the design of the gas department of Richfield Oil Co.

WILL SPEND $500,000 DRILLING DUNDEE AREA

WATKINS, N. Y., May 10.—Preparations are being made in the vicinity of Dundee, N. Y., for the drilling of two more wells for gas or oil. The Litteer Brothers are moving the drilling apparatus from the site of the recent discovery on the Litteer farm to a new location on the Charles Lasey farm. The site of the third well is approximately 2,000 feet southeast of the 10,000,000-foot well recently brought in. It is situated in a field on the Altay road about two and one-quarter miles north of the hamlet of Altay, Schuyler County.

The site of the fourth well is 2,100 feet southwest of the initial drilling on the Emmett Pulver in Altay Township, Schuyler County. The rig is on the ground.

Just how many wells will be sunk in close proximity of the present two could not be learned. Frank Brewster, general manager of the Belmont company, stated that approximately $500,000 will be spent in developing the extensive gas field in the area in question. The first discovery of gas was on the Pulver farm and gas was reported to be flowing at approximately 6,000,000 feet daily.

The second large gas well in the field came in late in April.

The Belmont Quadrangle Drilling Co. has more than 14,000 acres leased in the Dundee area for gas and oil privileges.

GAS INDUSTRY IN MARVELOUS EXPANSION

(Continued from Page 38)

most effective results we have agreed that the distribution of our funds should be limited to two schools, preferably representing two distinct sections of the country.

"After making our complete study of this subject we have selected the University of Oklahoma to represent the western section and the University of West Virginia to represent the eastern section. The income allotted to each school will be applied in that school as determined by consultation between the school and the committee. The school will submit a list of recommended students each year, giving the detailed experiences and qualifications in each case, and the selection of the student or students to receive aid will be made by the committee. Whether such aid will be in the nature of an undergraduate loan or a postgraduate fellowship will depend upon the merits of the various cases submitted each year.

Advances to Undergraduates

"The advances made to undergraduates will be considered as loans to be repaid by the student after graduation unless the student to whom the loan was made completes a satisfactory amount of postgraduate or fellowship work.

"When used for postgraduate or fellowship work no repayment will be expected if a satisfactory amount of postgraduate work is done.

"It is expected that the plan can be put into operation at the beginning of the next school year.

"In presenting this report your committee feels certain that a very meritorious procedure has been developed along the lines desired by the donors of the fund, which will aid worthy students who are so inclined to pursue subjects helpful to our industry and which will aid the schools themselves in giving attention to natural gas subjects so that the students, the schools and our industry all will benefit."

Although the magnitude attained by the natural gas industry and the colossal character of projects begun in it during the last year were touched upon frequently throughout the convention the delegates were especially impressed by the important part played by the industry in helping to avert more serious conditions that threatened the country as a result of the recent business depression. Major Alexander Forward, New York, managing director of the American Gas Association, in telling about the work in the headquarters of the organization, said:

Tangible Results Seen

"Executing the program of the executive board in research in many fields, including those sponsored by the Natural Gas Department, and also those relating to pipe joints, pipe coatings, etc., headquarters is in a position to see tangible results present and prospective, of the associations patient and resolute pursuit of the facts that can be revealed only through such research."

The importance of friendly relations between the natural gas industry and the public was emphasized to a greater degree than in former years in papers by F. M. Rosenkrans, Gas Service Co., Kansas City, Mo., "Promoting Natural Gas Sales"; W. J. MacIntyre, Southern Cities Distributing Co., Shreveport, La., "Building Domestic Load by Selling Appliances"; Miss Albertine Berry, San Antonio Public Service Co., San Antonio, Tex., "Home Service," and by R. E. Haas, New York, Columbia Gas & Electric Corp., and R. S. McBeth, Tulsa, Oklahoma Natural Gas Corp., both of whom discussed "Activities of a Public Relations and Advertising Department." Mr. Haas defined public relations as "an every day practice by courteous, efficient, loyal, well-informed employes who render reliable, continuous, uniform services to their customers, with constant attention to satisfactory customer contacts to foster, merit and maintain the good will of a well informed, fair minded population toward the company."

Tribute to Manufacturers

Major Forward paid a compliment to the manufacturers of natural gas equipment and appliances for their progressiveness and for the vast amount of research work performed by them in devising new tools and methods and improving old ones. "We have come to the certain knowledge that the manufacturers of the industry do a great deal more for its upbuilding than they ever get credit for," he told the delegates.

The educational value of exhibits of the latest devices for use in the production, transportation and distribution of natural gas is recognized by men in the industry and if present plans are carried out, as seems probable, the exhibits which formed an attractive feature of the natural gas conventions in Dallas, Tex., in 1928, and Kansas City, Mo., in 1929, such exhibits will be a regular adjunct of the May conventions after next year. This will be brought about, according to the plans being made, by having the conventions held in connection with the International Petroleum Exposition in Tulsa, the exposition management changing the annual time for its show from fall to May. The natural gas men thus would be able to avail themselves of the permanent facilities for exhibition purposes offered by the exposition buildings. The meetings of the convention itself would be held in the new assembly hall on the exposition grounds.

Significance is attached to sentiments expressed regarding a suggested change in the natural gas men's organization setup. The subject was not referred to from the platform, but in informal discussions leaders in the industry said it might be wise for the natural gas men to consider discontinuance of their status as a department of the American Gas Association and becoming instead a divisional group of the American Petroleum Institute.

Convention City in Hands of Committee

The selection of the convention city for 1931 is in the hands of the Time and Place Committee and no intimation was given as to what city was favored. The committee will make its recommendation to the October convention of the American Gas Association in Atlantic City. Shortly before that convention also the nominating committee of the Natural Gas Department will report its recommendations for officers for the department to serve throughout the ensuing year. Interest centers here in the choice of a vice chairman, who in accordance with precedent will serve as chairman in 1932. The nominating committee, named by the Managing Committee at the New Orleans convention is composed of N. E. McGowen, Shreveport, La., vice president and general manager of the Louisiana Gas & Fuel Co.; A. W. Leonard, Tulsa, vice president and general manager of the Devonian Oil Co., and J. D. Creveling, New York, head of the natural gas department of Henry L. Doherty & Co.

Most of the delegates, many of whom were accompanied by their wives, took advantage of the opportunity to visit spots of historic interest in and near New Orleans and were guests on a steamboat trip on the Mississippi River. Some were able to visit the Mince compressor station at Sterlington, La., the largest metering station in the world. The station is a part of the plant of the Arkansas-Louisiana Pipe Line Co., with a capacity of practically 16,000 horsepower.

SAREPTA DISTRICT GETTING ATTENTION

(Continued from Page 38)

passing of Carterville and Zwolle, will cause a still busier one than is now immediately in prospect.

Present Production

Just now production, which averages around 26 gravity, is concentrated in Sections 1, 2 and 3, in Township 22-11, though Sections 34, 25 and 36, Township 23-11, in which there are four producers, are included in the proven area of 3,800 acres with as much or more probably to be added as drilling progresses closer to the top of the structure. After 1925, when there were 21 completions in the district, then regarded strictly as a gas field, 1928 was the big year with 14 completions, of which two proved the presence of oil in commercial quantities. Last year the field was not so active but in the first four months of the current year 10 wells have been completed, seven of them oil wells with 380 bbls. initial, an average of 55 bbls. daily, steady production. Most of the producers have been pumpers but two flowing wells have served to attract to Sarepta the increased attention it is getting and probably will continue to get in spite of the fact that a very loose sand is causing more or less pumping trouble and that much of the oil has to be treated to eliminate salt water some of the wells make along with the crude. Wells higher on structure are expected to show considerably less of these two troubles. At any rate, Sarepta apparently is to be one of the most active districts of this division during the coming summer.

OIL WELL IMPROVEMENTS PLANS NEW BUILDINGS

The purchase of a new administration building and adjacent land, and the erection of a new factory building and increased foundry, machine shop and other facilities are included in a $45,000 expansion program just announced by the Oil Well Improvements Co., Tulsa. The plans provide a new building 30'x90' to house the enlarged pattern shop, pattern storage rooms, cleaning room for cleaning the castings produced in the company's foundry, and a testing laboratory for testing high pressure control heads and other equipment.

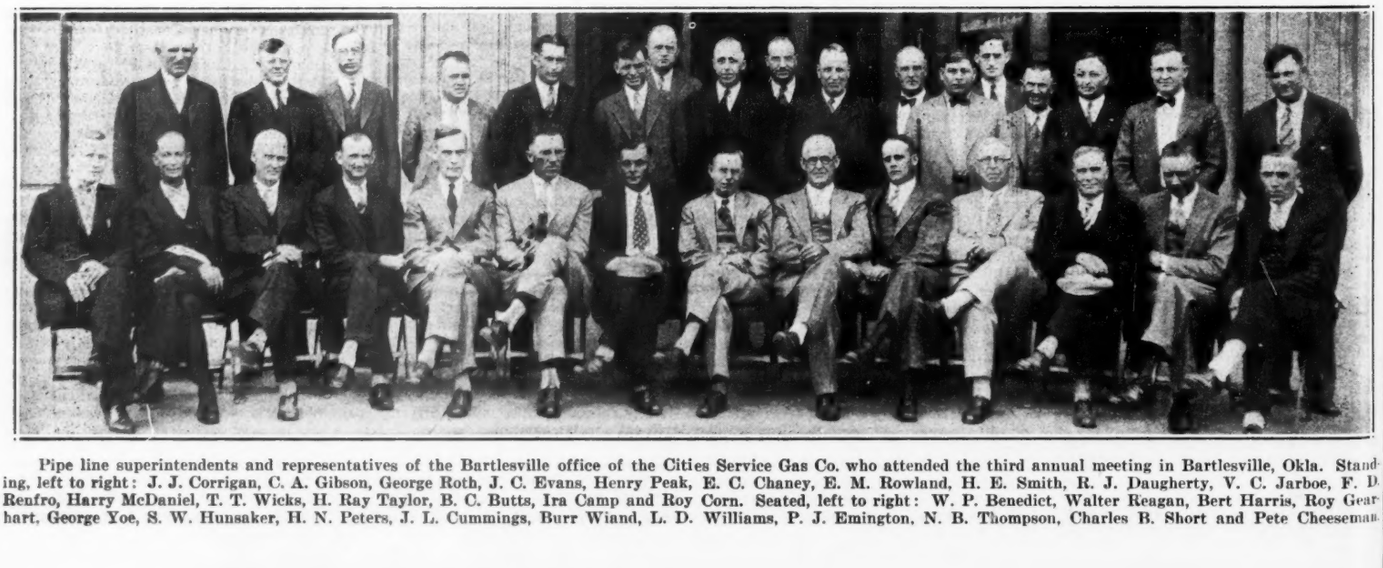
The removal of these departments from the present plant will enable the company to increase its foundry facilities and install needed additional equipment in the machine shop. The administration building is the two-story brick structure which the company has used as general offices for the past two years.

The company is the patentee and manufacturer of control casingheads, roller oil savers, Apex stuffing boxes, casingheads and other production equipment.

MEXICAN PRODUCTION

NEW YORK, May 12.—Mexican production of crude oil in the Panuco and Tuxpam districts during the week ended May 3 totaled 585,000 bbls., an average of 83,571 bbls., as compared with 590,000 bbls., or 84,286 bbls. per day, in the previous week. Light oil output in the week ended May 3 was 40,714 bbls. daily, against 41,429 bbls. per day in the previous week.

NATURAL GAS PIPE LINE MEN ATTEND ANNUAL MEETING IN BARTLESVILLE



Pipe line superintendents and representatives of the Bartlesville office of the Cities Service Gas Co. who attended the third annual meeting in Bartlesville, Okla. Standing, left to right: J. J. Corrigan, C. A. Gibson, George Roth, J. C. Evans, Henry Peak, E. C. Chaney, E. M. Rowland, H. E. Smith, R. J. Daugherty, V. C. Jarboe, F. D. Renfro, Harry McDaniel, T. T. Wicks, H. Ray Taylor, B. C. Butts, Ira Camp and Roy Corn. Seated, left to right: W. P. Benedict, Walter Reagan, Bert Harris, Roy Gearhart, George Yoe, S. W. Hunsaker, H. N. Peters, J. L. Cummings, Burr Wiand, L. D. Williams, P. J. Emington, N. B. Thompson, Charles B. Short and Pete Cheeseman.

PLAN GAS PIPE LINE TO ATLANTIC COAST

(Continued from Page 37)

a new pipe line system to be constructed shortly.

Manufacturers Light & Heat Co., a subsidiary of the Columbia Gas & Electric Co., last year purchased disused sections of pipe line in New York and Pennsylvania; one from the New York Transit Co., and others from the Southern Pipe Line Co. and the Pure Oil Co.

New York, Philadelphia, Baltimore, Washington and other large eastern cities have long been under consideration by natural gas interests as a logical field for expansion, but up to within the last two years, construction of a line sufficiently large to profitably move gas into this territory was considered impossible. The rapid strides in the technical features of long distance gas pipe line construction during this period, however, and the success which has attended the construction of other long distance lines has removed the last obstacle to the building of a pipe line reaching New York, and it has been merely a question as to which group in the natural gas field would be first to tap the virgin territory in the East Coast area. For some time, it was considered probable that Standard Oil Co. (New Jersey) and possibly the New York Standard company would back a gas pipe line into New York, but at the present moment, Columbia Gas & Electric Co. appears to have the field to itself.

For Industrial Consumption

Present indications are that the New York line, at the outset, will not make a bid for any domestic business, but that the total flow will be marketed industrially. It is not believed that sponsors of a line into the local industrial territory would have any difficulty in booking their line to capacity with the large manufacturing enterprises in the New York and Philadelphia areas, and until this class of business has been taken care of, nothing in the direction of domestic sales is anticipated.

In so far as the New York City area is concerned, distribution of natural gas in its natural state is not looked for. Columbia Gas & Electric Corp., in a recent report, indicated that the board of directors had under consideration plans for extending its distributing system for the marketing of natural gas to large gas manufacturing companies, for blending with the manufactured product. This policy, it is believed, will be followed in this area, with the Consolidated Gas Co. of New York and the Public Service Corp. of New Jersey the logical buyers and redistributors of natural gas, after mixing with the manufactured product.

There are located in Kentucky and West Virginia a number of by-product plants and vast quantities of by-product gas, which contains a high B.t.u. content, would be available to supplement the natural gas supply for a pipeline extending to the Atlantic seaboard.

Effect on Refining Operators

The making available of gas for industrial purposes in the area which Columbia Gas & Electric is believed to be planning to enter will have a material effect upon sales of fuel oil and gas oil by local refining interests. Manufacturing enterprises in this area are large users of low grades of fuel oil, and completion of a pipe line into this territory from the gas fields of Ohio, West Virginia, Pennsylvania, and other States will doubtless result in the substitution of natural gas for oil in many instances. Development of this pipe line system will result in the forcing of further readjustments in the manufacturing operations of East Coast refiners, necessitating further expansion in cracking operations with resultant smaller production of low grade fuel oils.

Speculation as to the potential supply of natural gas for New York and the ability of comparatively nearby gas fields to take care of these requirements is more or less general among trade interests. There appears to be a general feeling that the market for natural gas in the East is limited only by the ability of pipe lines to transport the fuel here, with New England looming as a vast potential market after the needs of New York and Atlantic Coast territory south of this point have been taken care of. This angle has given rise to some discussion as to the possibility of reaching still further for natural gas, and the possibilities of piping gas from Texas and Louisiana all the way to the Eastern Atlantic seaboard area. Whether the costs of transporting the gas for such a distance would permit of a development of this nature is as yet undecided, however.

Construction of a natural gas pipe line to New York, in conjunction with the numerous important pipe line enterprises under way in the Mid-West at this time has brought to mind the picture of a vast coast-to-coast network of natural gas pipe lines, which until a few years ago was classed as entirely visionary. The rapid rate of development of gas pipe line construction, however, has removed such a network from the "visionary" field, and has tended to bring it within the realm of probability.

California Operators Told They Must Sign Or Curtailment Ends

By L. P. Stockman

LOS ANGELES, Calif., May 12.—Late developments indicate that the crisis confronting the California industry due to the failure of a small minority of independent operators at Long Beach and Santa Fe Springs to co-operate will be safely passed within the next 15 days. Those who have refused to ratify the extension of present curtailment work were given until May 15 to sign the proposed curtailment agreement for the next 90 days in lieu of abandoning present conservation work.

Paul N. Boggs, chairman of the general oil conservation committee, sent an urgent message to the chairman of each committee stating, "We must demonstrate our faith and determination by getting immediately under the present figure of 609,000 bbls. daily and further pledge to follow on whatsoever curtailment is found necessary. I do not anticipate it will be so severe as some believe it will. I think not less than 575,000 bbls. daily production will solve the problem and result in quick returns to the operators and stabilize the industry. Now as never before when our country is so pressed with threatened disaster due to overproduction in all major products it must look to the oil industry to lead the way. Investors throughout the nation are watching us knowing full well if we fail Oklahoma and Texas cannot carry on. If the California oil industry which has so nearly achieved the victory of self-control breaks there is no leader to steady the boat."

Operators in the Elwood Field of Santa Barbara County have endorsed the proposal to reduce the allowable daily production and continue curtailment work for another 90 days. Operators in this field adopted a resolution which reads that, "in order to further stabilize the condition of the California oil industry and to keep the Elwood Field production at any figure arrived at by the general committee, which figure would in turn conform with all other fields in the same group as to percentage, all excesses now existing and which may occur in future production at Elwood will be absorbed within the next period following the occurrence."

BANDITS KILL OIL MAN

WASHINGTON, D. C., May 10.—Paul LeRoy Keating, 23, of Oil City, Pa., employed by the Tropical Oil Co., Colombia, was murdered yesterday near Barranca Bermeja, Colombia, by desperados who robbed the company's pay car and escaped with $35,000 according to advices received by the State Department from American Minister Caffery at Bogota, who said the Colombian foreign minister promised energetic measures to capture the desperados.

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that tubing leak before you start out with the tubing!

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After the rods have been pulled and the standing valve examined to make sure it is not leaking, the Indicator is inserted in the tubing as shown in the illustration on the left. The Indicator floats down the tubing with the fluid as it passes out of the leak. As the Indicator is started down the tubing, fluid is run in on top so as to build up a head that helps push it on down to the leak. Also this fluid on top of the Indicator keeps the pressure inside the tubing at the maximum, which is necessary because pressure leaks close up when the pressure is removed, making them hard to find with any other method.

When the Indicator reaches the leak it shuts it off and stops there. It cannot go any further because the fluid between the leak and the standing valve will not compress. The operator knows when the Indicator has reached the leak and shut it off because the tubing fills up and stands full. Pull the tubing to the Indicator and there is the leak.

Send for literature describing this tool in detail.

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PRODUCTION OF STEEL IS RUNNING SMOOTHLY

By B. E. V. Luty

PITTSBURGH, Pa., May 12.—Conditions as to steel may be described variously, according to the viewpoint. Demand, as represented merely by tonnage, has been rather large in the past three months if the view be accepted that business in general has been in a state of depression. Relative to productive capacity demand has not been so good as capacity has been increasing. To bring out the point by making a specific comparison, total production of steel ingots in February, March and April, about 12,625,000 tons, was nearly 3 per cent over that in the same months three years ago, a record period in its time, but capacity has increased fully 10 per cent in the three years, whereby production in the three months just passed represented about 80 per cent of present capacity while the 3 per cent less production three years ago represents 87 per cent of the capacity then existing.

Production in these three months was 13 per cent under that of a year ago and 2½ per cent under that of two years ago. Those were exceptionally active times, but steel makers have a way of taking any record they have made as standard for the future, trying to work up to it. Accordingly there has been very strenuous competition, frequently at the expense of prices, and the general trend of steel prices has been downward right along, with outright quotable declines at intervals. Cutting spreads until a lower open market is recognized.

As to trends, fluctuations in the rate of steel production have been small since recovery about February 1 from the big dip of December. The peak rate was at the middle of February, about 82 per cent, with declines thereafter to April 1 then a partial recovery to 80 per cent late in April and a slight decline since then, to about 78 per cent last week. Probably this is the beginning of the usual seasonal decline, to a low July, but as things are running quite smoothly as to steel consumption no very substantial decrease is to be expected in the next 60 days.

There does not seem to be anything for the steel mills to lose in the next three or four months as to steel requirements of the freight car shops, for Class I railroads installed only 6,716 freight cars in March while they had 35,181 on order at the close of the month. Structural fabricating shops have been running very well and still have a large order book, covering several months of work, although since the first of the year shipments have slightly exceeded bookings. The agricultural implement industry continues to run at a high rate and as so large a proportion of its business is in tractors there is not likely to be as much slowing down as there used to be July 1, when the period between autumn implements and spring implements begins. As to the automobile industry it has done rather poorly to date, having correspondingly less to lose, and its production rate seems to be going up a trifle, several weeks after the usual peak time of the year.

Finished steel prices are doing no better than they were. Prolonged and extensive cutting in wire and wire products has been recognized by the American Steel & Wire Co. formally reducing its prices, which to jobbers are now 2.30 cents on annealed fence wire, $2.15 on nails and 2.80 cents on galvanized barb wire, now only 5 cents per hundred pounds above plain galvanized wire against the 15 cents prevailing until lately. Cutting in black sheets is now recognized by quoting the market at 2.55 cents to 2.65 cents against flat 2.65 cents formerly, galvanized sheets remaining at 3.30 cents.

Bars, shapes and plates are being shaded rather commonly in some areas, also as usual on large lots for construction jobs, but Pittsburgh mills are still maintaining 1.80 cents as their regular quotation. If the market does not become steadier a formal reduction will in all probability be announced and given full publicity.

Nothing new is reported in the pipe trade, following the large amount of line pipe business reported a week ago.

Mexican Oil and Coal Company, Inc.

Circular on Request

A. H. HANSON & CO.

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ANNUAL CONVENTION OF SCOUTS IN TULSA

The Mid-Continent Oil Scouts and Land Men's Association will hold its fifth annual convention in Tulsa on May 23-24. Headquarters will be in the Hotel Tulsa. Arrangements have been made to handle the largest crowd ever attending an Oil Scouts' convention, and 300 members are expected.

Practically all the oil companies in the Mid-Continent area have arranged a holiday for the Scouts and Land Men and especial emphasis is placed by the association's invitation to the ladies. A most enjoyable program has been arranged for them.

The program announced by C. A. Savage of the program committee follows:

Friday, May 23, 9:30 a.m. to 1:30 p.m., registration at Hotel Tulsa.

1:45 p.m.—Horse races, Tulsa Jockey Club. Tickets complimentary of the Tulsa Jockey Club.

7:30 p.m.—Banquet, Hotel Tulsa. Toastmaster, S. M. Blevens. Address of welcome by Tom Monroe, commissioner of fire and police, city of Tulsa. Response by Ralph Walkingstick, president of the Mid-Continent Oil Scouts and Land Men's Association; address by E. B. Reeser, president of the American Petroleum Institute and Barnsdall Oil Co.; address by Wirt Franklin, president of Wirt Franklin Petroleum Corp. Vocal numbers by the First National Bank quartet. Honorary guests—executives and land department heads from the various oil companies.

Saturday, May 24—Business meeting at Hotel Tulsa at 10:30 a.m. Papers on various districts, and on Oklahoma City area, "New Problems of Development," by a member of the association. Election of officers.

1:30 p.m.—Barbecue (courtesy of Tri-State Royalty Co.) for members on W. E. Brown farm, 1 mile south of the Garland Airport, east of Tulsa. Special entertainment. Trasportation leaves Hotel Tulsa at 1:45 p.m.

9:00 p.m.—Dance, Hotel Tulsa, Jackson's orchestra.

Program for the ladies: Friday, May 23, 2:00 p.m.—Reception and bridge, mezzanine floor, Hotel Tulsa. Prizes through the courtesy of R. Otis McClintock, president of the First National Bank.

7:00 p.m.—Theater party.

Saturday, May 24, 1:45 p.m.—Horse races, Tulsa Jockey Club, transportation leaves Hotel Tulsa, promptly.

9:00 p.m.—Dance at Hotel Tulsa.

IMPERIAL HAS ANNIVERSARY

CHATHAM, Ontario, May 10.—At Toronto recently, employes of Imperial Oil, Ltd., now numbering approximately 10,000, marked the fiftieth anniversary of the formation of the original Imperial Oil Co. by presenting President C. O. Stillman with a check for $35,300 to be used as the nucleus of a trust fund. This fund, voluntarily subscribed by the employes, is to be devoted to humanitarian purposes and will be administered by the directors.

COMMITTEE OF NINE TO MEET ON MAY 24

WASHINGTON, D. C., May 12.—The Committee of Nine of the American Bar Association appointed by the section on mineral law will meet in Chicago on May 24 and will at that time make recommendations on proposed oil laws submitted to it for presentation to state legislatures. The report of the committee will go before the minerals section at the meeting of the bar association, August 19. Former Senator Chester I. Long of Kansas, a former president of the American Bar Association, is chairman of the Committee of Nine in which capacity he will attend the meeting in Chicago this month.

MORE FUEL AVAILABLE AT GULF COAST PLANTS

HOUSTON, Tex., May 13.—A turning point was indicated in the Gulf Coast fuel market at the opening of the week as the extreme tightness of the past several weeks showed signs of easing up slightly. Although still not available in large quantities fuel oil was being offered Tuesday by a few sources of supply at prices slightly below the figure which the majority of sellers have maintained.

A little fuel was being quoted as low as 75 cents although the bulk was quoted nominally at a minimum of 80 cents. The appearance of some fuel on the market was entirely unexpected. The low stock situation together with the fact that most refiners had been consuming virtually their entire daily production for cracking led buyers to believe there would be no immediate relief from the general tightness of the product.

Along with the easing up of fuel, gas oils also were offered from an eighth to a quarter cent lower than the previous quotations, this product Tuesday being quoted from 3¾ to 4 cents. Gas oil, however, continues fairly tight as there never is a great amount of this material for the open market.

Pale and red oils continued unchanged with a steady volume of business being enjoyed by all refiners. Stocks on lubricating oils are reported lower than at any time in the past year and with sales on a profitable basis a generally healthy condition prevails.

ONE WELL TO CITY BLOCK

AUSTIN, Tex., May 10.—A policy of permitting one well to each city block in towns that have turned into oil fields was announced by the Texas Railroad Commission. The commission granted Houston Oil Co., majority owner of leases in the block, exclusive right to drill one well in a block in the city of Refugio, denying the owner of one lot the right to drill. It ordered that all owners of property in a city block shall share equally in bonus and oil royalties from the block's production.

SELL AVIATION OILS

The Aviation Corp., through its subsidiary the American Airways, Inc., has purchased 100,000 gallons of Stanavo aviation engine oil for delivery over the next 12 months. This is said to represent the largest single order ever made for lubricating oil in commercial aeronautics.

The Stanavo Specifications Board, Inc., is owned by the Standard Oil Companies of California, Indiana and New Jersey and was organized for the purpose of cooperating in the manufacture and sale of petroleum products suitable for aircraft industry.

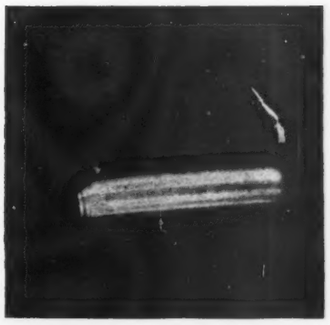
COLON PRODUCTION

NEW YORK, May 12.—Colon Development Co., operating subsidiary of the Colon Oil Corp. in Venezuela, produced 101,635 bbls. of crude in the week ended May 2, an average of 14,519 bbls. per day, as compared with 108,668 bbl., or 15,525 bbls. per day, in the previous week.

J & L Seamless

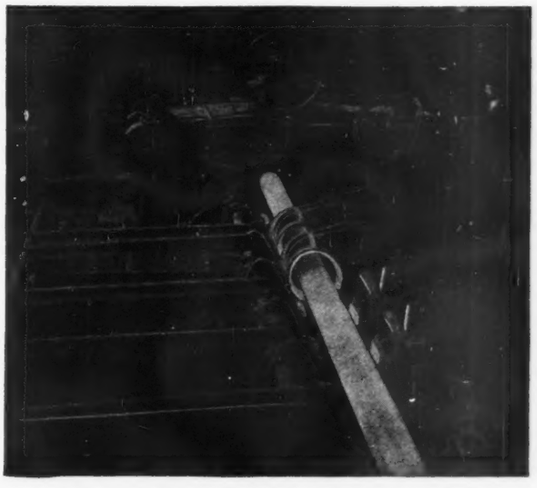
Gets its *Extra Smooth* Inside Surface in the

World's Largest Reelers

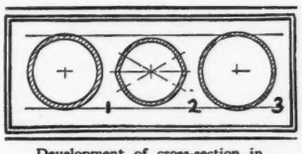


The picture above shows one of the highly finished and extra long reeler plugs which J & L employs to obtain unusual smoothness of inside surface in J & L Seamless casing.

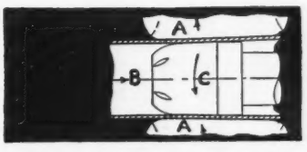
One of the most important processes in the production of highest quality Seamless Pipe is that which takes place in the reeler. By employing the largest and most powerful reelers in the world today, J & L is able to produce Seamless Casing, Tubing and Drill Pipe unsurpassed for smoothness of inside surface and in density of steel structure. The huge size of these reelers permits J & L to successfully employ extra long reeler plugs. In this way the inside surface of J & L Seamless is subjected to extra long contact with the reeler plug which imparts a smooth, even inside finish.



The picture above is a general view of one of the powerful J & L reelers, the largest in the world. Pipe is shown emerging from reeler.



Development of cross-section in manufacture of J & L Seamless: 1. after second piercing; 2. after plug mill; 3. after reeler.



Sketch showing reeler operation. "A" are the rolls, "B" is the pipe, and "C" is the highly finished reeler plug, which gives J & L Seamless its extra smooth inside surface.

J&L PIPE

JONES & LAUGHLIN STEEL CORPORATION

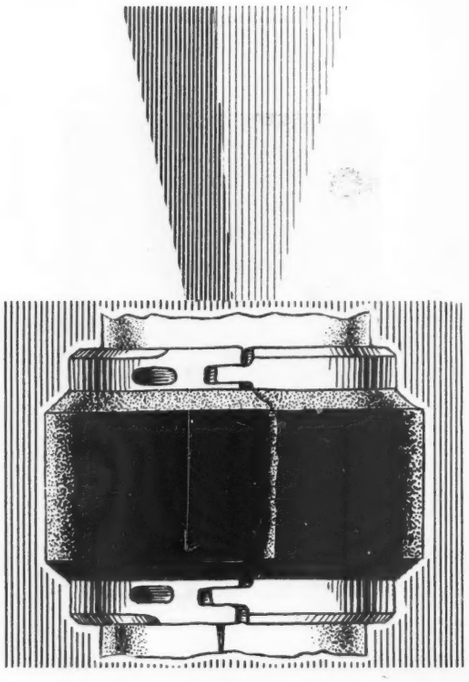
AMERICAN IRON AND STEEL WORKS

J&L STEEL

Manufacturers of Seamless and Welded Casing, Tubing, Drill Pipe and Line Pipe, and Welded Steam, Gas and Water Pipe in both Black and Galvanized.

Also makers of Bars, Shapes and Plates, Reinforcing Bars, Cold Finished Steel, Junior Beams, Steel Piling, Fabricated Structural Work, Steel Barges, Wire Products and Tin Mill Products.

JONES & LAUGHLIN BUILDING, PITTSBURGH, PENNSYLVANIA



No Stretched Rubber in Calmec Protectors

Stretched rubber, subjected to constant pounding, soon loses resiliency. In the Calmec Pipe and Casing Protector a high quality rubber of special mix is moulded tightly, but not stretched, on a metal core. It maintains its full quota of resiliency. It is not under tension, cannot tear itself apart. That is but one feature of the Calmec Protector. It also affords a metal to metal grip that cannot slip. Hinges and metal eccentric pins make its application to the drill pipe simple, sure and easy.... Operators prefer the Calmec Protector because of the scientific principles embodied in its construction. A Calmec assures longer life.....lower drilling Costs

CALIFORNIA MFG.
and
ENGINEERING CO.

5333 So. Riverside Dr.
LOS ANGELES, CALIF

WILDCAT OPERATIONS IN OKLAHOMA

(Continued from Page 50)

GRADY COUNTY

J. V. Bailey's No. 1 Hubbard, C NE NW Sec. 1-10-6w..Shut down 100 ft.
J. M. Henry et al's No. 1 Abraham, SE cor. NW Sec. 4-5-8w .....Rig.

GRANT COUNTY

Baucher et al's No. 1 Deadman, SW SE Sec. 12-28-4w ..Drlg. 4,810 ft.
Cowden et al's No. 2 Vollmer, CEL NE SW Sec. 22-25-4w.Shut down 5,640 ft.
Otstot's No. 1 Tabor, C NE NE SE Sec. 23-26-3w .....Drlg. 5,170 ft.

GARVIN COUNTY

Nelson et al's No. 1 Strickland, NE SW Sec. 10-4-3 ....Drlg. 2,130 ft.

GREER COUNTY

I. T. I. O. et al's No. 1 fee, C SW NE Sec. 17-6-24w ....Fishing 2,286 ft.

HARMON COUNTY

Harmon-Tex Oil Co.'s No. 1 Hoadley, NE cor. Sec. 17 4-24w .....Shut down 1,510 ft.
S. M. Stauffer's No. 1 Castleman, SW NE Sec. 8-4-26w ..Shut down 625 ft.

HARPER COUNTY

Empire's No. 1 Bruce, C NE SW Sec. 12-25-20w .....Drlg. 4,050 ft.
Sinclair Oil & Gas Co.'s No. 1 Howell, C SW SW Sec. 14-26-24w .....Drlg. 8,566 ft.

HASKELL COUNTY

Mid-Western's No. 1 Polster, C NE SE Sec. 33-10-22 ..Underreaming 8-in csg. 2,375 ft.
Holden's No. 1 Phillip, SE cor. Sec. 3-9-18e .....Shut down 1,860 ft.
Marion Oil's No. 1 Sanders, NW NE SW Sec. 10-9-18e ..Shut down 2,387 ft.
Sanboise Gas' No. 1 Unknown, SW NW SE Sec. 32-9-21e..Shut down 2,100 ft.

HUGHES COUNTY

Wright et al's No. 1 Ott, SE SW Sec. 15-5-11 .....Spudding.
Canady et al's No. 1 Kanard, NW SW Sec. 29-9-12 ....1,000,000 ft. gas 2,284-90 ft.; total depth 2,815 ft.; drlg. 3,218 ft.
Irwin et al's No. 1 Jones, SE NW Sec. 30-5-10 .....Drlg. 3,115 ft.

KAY COUNTY

Alco Royalty Co.'s No. 1 Wolf, SE SW SE Sec. 34-26-2w.Rig.
Waggoner Pet. Co.'s No. 1 Hinkle, C SW NW NW Sec. 3-26-3 .....O.W.D.; total depth 2,430 ft.; drlg. 3,150 ft.
Blankenship Petroleum Co.'s No. 1 Hansen, SW NW SW Sec. 17-27-2 .....Drlg. 850 ft.

KINGFISHER COUNTY

Superior Oil Co.'s No. 1 Story, SE cor. Sec. 25-19-5w ....Fishing 6,285 ft.
Galt Brown's No. 1 Wolf, NW SE Sec. 6-16-7w .....Shut down 6,015 ft.

KIOWA COUNTY

Merrick Oil Co.'s No. 1 Kelly, NW cor. SE Sec. 20-7-17w.Shut down 1,525 ft.

LEFLORE COUNTY

Red Bank Oil Co.'s No. 1 fee, SE SW NW Sec. 23-9-24 ..Total depth 5,440 ft.; 15,000,000 ft. gas; fishing 5,433 ft.

LATTIMER COUNTY

Limestone Oil & Gas Co.'s No. 1 Murray, NE cor. Sec. 25-5-18 .....Rig.
Limestone O. & G. Co.'s No. 1 Shaw, NW cor. NE NW Sec. 23-5-18e .....Drlg. 3,000 ft.

LINCOLN COUNTY

Magnolia Pet. Co.'s No. 1 Winship, NE SW Sec. 2-13-4..Location.
Tom Slick Oil Co.'s No. 1 Hammer, SE NW NW Sec. 35-16-2 .....Drlg. 4,625 ft.

LOGAN COUNTY

Prairie and Slick's No. 1 Morgan, NW NE Sec. 33-16-1w .....Drlg. 3,045 ft.
Eason Oil Co.'s No. 1 Young, C SW NE SW Sec. 34-17-4w.Rig.
Haley & Smith's No. 1 Guier, SE cor. SW Sec. 33-18-3w..Shut down 3,970 ft.

McINTOSH COUNTY

T. C. Young's No. 1 Derrison, Sec. 3-12-15 .....Fishing 2,325 ft.
Patterson et al's No. 1 Smith, SW cor. NW SE Sec. 32-9-16 .....Shot 240 qts. 5,446-5,559 ft.; shot went off up hole; fishing.

MURRAY COUNTY

Chieftain Royalty Corp.'s No. 1 Hendrix, SW SE NW Sec. 27-2-2 .....Shut down 900 ft.

MUSKOGEE COUNTY

Sioux Oil Co.'s No. 1 Unknown, NW SE Sec. 21-11-19 ....Shut down 1,011 ft.

NOBLE COUNTY

Weaver & Craigin's No. 1 Frederick, C SW NE Sec. 4-24-1w .....Drlg. 650 ft.
Gypsy Oil Co.'s No. 1 Bergstrom, SE NE Sec. 28-22-1w ..Drlg. 4,570 ft.

OKFUSKEE COUNTY

Flynn & Morgan's No. 1 Burton, NE SW SE Sec. 14-13-9..Drlg. 1,795 ft.
Irwin et al's No. 1 Allen, SE SW NE Sec. 15-13-9 .....Drlg. 3,102-15 ft.; dry sand.
Henry Oil Co.'s No. 1 Harjo, Sec. 36-12-9 .....Shut down 2,795 ft.
E. L. Robinson's No. 1 Rice, NW Sec. 2-10-9 .....Location.
Shepard et al's No. 1 Neveas, SE NW SW Sec. 3-12-10..Shut down 3,661 ft.

OKLAHOMA COUNTY

Prairie and Slick's No. 1 Dill, SE NW Sec. 17-13-3w ....Drlg. 4,370 ft.
Cromwell-Franklin's No. 2 Thompson, SW NE Sec. 15-12-3w .....Fishing 4,135 ft.
Warr et al's No. 1 Castle, SW NW Sec. 20-11-3w .....Drlg. 4,900 ft.
J. F. Cuniff, trustee's No. 1 Church Land, NE SW SE Sec. 17-12-4w .....Drlg. 5,700 ft.
Magnolia and Ramsey's No. 1 Johnson, C NE SW Sec. 35-13-3w .....Drlg. 6,135 ft.
Ryan Consolidated's No. 1 Lawton, NE NW Sec. 3-11-2w..Drlg. 6,455 ft.
Tom Slick Oil Co.'s No. 1 Martin, C NW NW Sec. 13-13-1w .....T. D. 6,971 ft.; water; plugging back 6,871 ft.; testing.
Hall & Briscoe's No. 1 Holmes, NE cor. SW SE Sec. 10-11-3w .....Top checkerboard 5,400 ft.; drlg. 6,020 ft.

OSAGE COUNTY

Western American Oil Co.'s No. 1, NW SE Sec. 28-23-6..Location.
Peters Petroleum Co.'s No. 1, SW cor. NE Sec. 5-22-8 ....Drlg. 2,425 ft.
Kay County Gas' No. 1, C N half NE Sec. 28-24-4 .....Drlg. 3,670 ft.
Continental Oil Co.'s No. 1, NW SE SE Sec. 24-24-5 .....Shut down 3,549 ft.

PAWNEE COUNTY

Flynn & Morgan's No. 1 Jones, SW NE Sec. 22-20-5 ....Rig.
Cochran et al's No. 1 Green, NE cor. SW Sec. 15-23-5 ....Rig.

PITTSBURG COUNTY

Empire O. & R. Co.'s No. 1 Williams, C NE SE Sec. 33-7-16e .....Fishing 3,975 ft.

POTTAWATOMIE COUNTY

Keister & Manning's No. 1 Rowlett, SW SE NE Sec. 30-8-4 .....Drlg. 4,468-80 ft.; pinched to 180 bbls.

ROGER MILLS COUNTY

Bucy & Stone's No. 1 Williams, C SW Sec. 23-12-24w ...Shut down 2,245 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ....Shut down 2,905 ft.

SEMINOLE COUNTY

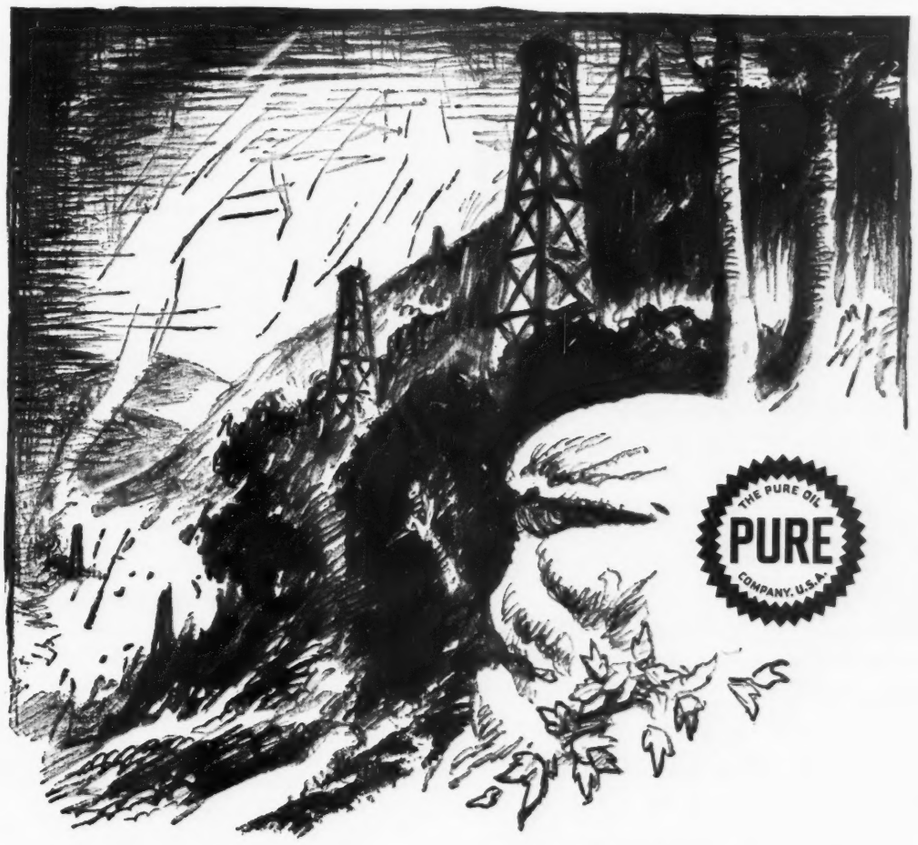
T. Adkins et al's No. 1 McGilbray, SE NE Sec. 4-8-8 ....Drlg. 1,025 ft.
Magnolia and Twin State Oil Co.'s No. 1 Harns, SW NE NE Sec. 8-5-6 .....R.U.S.T. 3,068 ft.
Independent Oil & Gas Co.'s No. 1 Johnson, C NE NE Sec. 33-9-8 .....Drlg. 3,547-61 ft.; 25,000,000 ft gas; mudded; Wilcox 4,426-33 ft water; shut down.
Prairie Oil & Gas Co.'s No. 1 Anders, NW cor. Sec. 23-6-6 .....Wilcox 3,996-4,000 ft.; water; abandoned.
Sunray Oil Co.'s No. 1 Sunday, NW SE Sec. 35-5-5 .....Location.

WASHITA COUNTY

Southern Inv. Co.'s No. 1 Musie, NW cor. Sec. 10-9-20w..Shut down 280 ft.

WOODS COUNTY

Peerless O. & G. Co.'s No. 1 Crowell, C NW NE Sec. 23-28-16w .....Drlg. 5,570 ft.
Gypsy-Prairie et al's No. 1 Thompson, SE cor. SW Sec. 10-25-15w .....Shut down 6,104 ft.
Sinclair Oil & Gas Co.'s No. 1 Showwalter, C SW SW Sec. 33-27-16w .....Shut down 6,790 ft.



It's what is back of the advertisement that counts

Back of this advertisement and the Pure Oil salesmen, back of the products which they sell, is a vast army of men—ready to serve you. Hundreds are working in Pure Oil's producing fields, others are operating its modern refineries. Some direct the movements of Pure Oil tank cars while some flash orders over private telegraph lines. *Every* operation from wells to you is ably controlled by The Pure Oil Company—your assurance of uniform quality . . . delivery on the dot!

Pure Oil is an independent company . . . and is successful because of unvarying high quality in all of its products,

Tune in on the PURE OIL HOUR
Over WJZ and 21 Stations of N. B. C.
Every Tuesday Night

THE PURE OIL COMPANY
U. S. A.

Producers, Refiners, Marketers of a complete line of petroleum products

REFINERIES:

Marcus Hook, Pa.
Cabin Creek Jct., W. Va.
Heath, Ohio
Ardmore, Okla.
Muskogee, Okla.
Smith's Bluff, Texas

SALES OFFICES:

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New York
Minneapolis
Philadelphia
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Columbus, O.
Charleston, W.Va.
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Atlanta, Ga.
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Miami, Fla.
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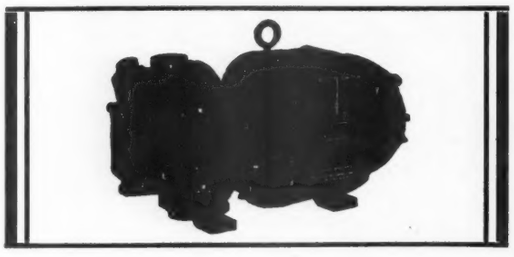
Beaumont, Tex.

A complete easily installed dependable Rig Lighting Unit

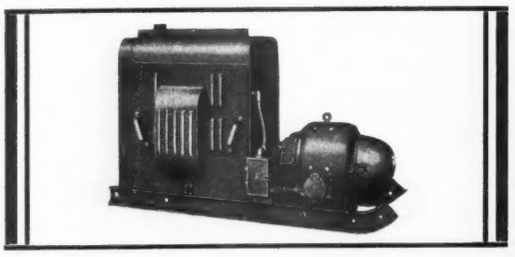


The Pyle-National Type M-2-S Turbo-Generator is a complete rig lighting unit with built-in safety switch and fuse box to replace the usual terminal box.

Of large capacity, heavy duty construction, Type M-2-S is thoroughly dependable in operation. It runs month after month without interruption of service, delivering plenty of light, and requiring oiling only at long intervals.

Send for descriptive bulletins giving complete details of Type M-2-S.

Gas Electric Plant



Type O Direct Current Constant engine speed regardless of load gives dependable power for lighting equipment.

THE PYLE-NATIONAL COMPANY

General Offices and Works:

1334-1358 N. Kostner Ave. Chicago, Ill., U. S. A.

Direct Factory Representative:

R. L. KILKER, Exchange National Bank Bldg., Tulsa, Okla.

OGJ 5-15 Gray

WOODWARD COUNTY

Farrond et al's No. 1 Unknown, SE cor. SW SE Sec. 2-22-17w ..... Shut down 1,387 ft.
Prairie Oil & Gas et al's No. 1 Wilbur, NE cor. NW Sec. 22-23-17w ..... Drlg. 6,660 ft.
Burgoyne Brothers' No. 1 Merkins, SW cor. SE NE Sec. 15-21-19w ..... Shut down 1,910 ft.

OKLAHOMA PANHANDLE

CIMARRON COUNTY

Magnolia's No. 1 School Land, C SW NE Sec. 27-5-5 .... Drlg. 100 ft.

TEXAS COUNTY

Palo Alto Oil Co.'s No. 1 Graves, NE SW SW Sec. 23-2-18e ..... Spudding; shut down.
Argus Prod. Co.'s No. 1 Ralston, C SW Sec. 23-6n-14e .. Rig.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Bryant-Croxton's No. 1 Mason, NW NE NW Sec. 4-1s-14 .. Drlg. 1,560 ft.
Bookshire's No. 1 Guinn, NW cor. Sec. 18-3s-10 ..... Shut down 100 ft.

BRYAN COUNTY

Bush et al's No. 1 Commerce Trust, NE cor. Sec. 35-6s-9 ..... Fishing 305 ft.
Johnson et al's No. 1 Usery, SE SW SE Sec. 14-6s-7e .. Shut down 385 ft.
Slab Oil Co.'s No. 1 Ryle, NW SE SE Sec. 27-6s-7 .... Drlg 1,210 ft.
Marshall's No. 2 fee, C SW SE NW Sec. 26-5s-7 ..... Shut down; 6-in. csg. 265 ft.
Yale Oil Syndicate's No. 1 Craige, C NW NE Sec. 36-9s-9e ..... Shut down 2,200 ft.

CARTER COUNTY

Campen-Lasater Co.'s No. 1 Anderson, NE cor. SE NE SE Sec. 32-4s-2 ..... Fishing 2,580 ft.

CHOCTAW COUNTY

Choctaw Petroleum Co.'s No. 1 Wilson, SW cor. SW Sec. 15-6s-19e ..... Shut down 1,346 ft.

COMANCHE COUNTY

Pelwin Oil Co.'s No. 1 Tafepirdy, C NW NE NE Sec. 5-1s-9w ..... Location.

COTTON COUNTY

Empire O. & R. Co.'s No. 1 Chambers, NW SE Sec. 8-3s-9w ..... Drlg. 4,330 ft.

JOHNSTON COUNTY

N. A. Neff's No. 1 Chapman, C SW NW Sec. 20-4s-5 .... Location.

LOVE COUNTY

Hobbs et al's No. 1 Roberts, NE cor. SW Sec. 20-6s-3w.. Drlg. 1,195 ft.
Gilcrease Oil's No. 1 Burkhart, NE NW Sec. 13-6s-1 .... Rig.

MARSHALL COUNTY

Wheeler et al's No. 1 Taylor, NE NW NW Sec. 8-7s-6e.. Rig.
Akers et al's No. 1 Spicer, SW SE SE, Sec. 32-5s-7e.... Rig.

McCURTAIN COUNTY

Milton et al's No. 1 Vase, SW NW Sec. 26-6s-21 ..... Shut down 2,287 ft

STEPHENS COUNTY

R. Southard's No. 1 McKinney, NE cor. Sec. 25-1-8n..... Rig.
Wirt Franklin Petroleum Corp.'s No. 1 McPhail, NW SE Sec. 1-2s-7w ..... Drlg. 4,081 ft.

TILLMAN COUNTY

Bryant's No. 1 Miller, NE cor. Sec. 9-1s-14 ..... Drlg. 300 ft.
Bridwell's No. 1 Pan-te-chee, NE SE, Sec. 4-4s-16w.... Shut down 835 ft.
Flake's No. 1 Barba, NE SE NE SE Sec. 19-1s-16w .... Shut down 1,185 ft.
Allen Brothers' No. 1 Howell, SW NE Sec. 13-1-17w .... Drlg. 1,040 ft.
Landfair et al's No. 1 Smith, SE SW SE Sec. 6-2s-16w .. Location.

WILDCAT OPERATIONS IN KANSAS

(Continued from Page 52)

Hiatt & Durham's No. 1 Wendt, NW cor. Sec. 17-16-2 ... Shut down 50 ft.
Kruger et al's No. 1 Diche, C NW NE NE Sec. 17-13-4 ..... Shut down 2,935-43 ft.; water.
E. N. Morgan's No. 1 Whithair, NW SE Sec. 9-12-1 ..... Shut down 1,768 ft.

DOUGLAS COUNTY

Steinbuckel's No. 1 Unknown, SW NE NW Sec. 34-14-21.. Drlg. 880 ft.
Jenkins & Scott's No. 1 Haden, SE NW Sec. 10-12-17 ... Drlg. 1,800 ft.

EDWARDS COUNTY

Skelly's No. 1 Johnson, NE SW Sec. 21-26-17w ..... Total depth 5,095 ft.; abandoned.
Barnsdall Oil's No. 1 McCarty, NW NE Sec. 31-25-17w.. Total depth 4,556 ft., flowed 250 bbls. completed.
Dixie and Amerada's No. 1 McCarty, SW cor. Sec. 22-25-17w ..... 4,647-90 ft. water; shut down 4,755 feet.

ELLIS COUNTY

Central Commercial Oil Co.'s No. 1 Helms, SE cor. NE Sec. 2-12-20w ..... Drlg. 1,005 ft.
Streeter & Stearns' No. 1 Leiker, SW NE Sec. 26-13 20w.. Shut down 1,290 ft.
Byrene et al's No. 1 Fisher, NW SE Sec. 4-11-20w ..... Shut down 1,000 ft.
Rush Oil Co.'s No. 1 Gatewood, NW cor. NW Sec. 4-15-20w ..... Drlg. 3,290 ft.

FORD COUNTY

McNabb et al's No. 1 Fowler, C SE Sec. 26-27-22w ..... Shut down 400 ft.
Swain et al's No. 1 Kenthorne, C NW Sec. 21-25-24w .... Drlg. 2,250 ft.

GOVE COUNTY

Valerius & Baucher Oil Co.'s No. 1 Todd, NW cor., Sec. 24-13-27w ..... Rig.

GRAHAM COUNTY

Gulf Coast Oil Co.'s No. 1 Johnson, C S half Sec. 27-8-25w. Shut down 4,340 ft.
Naylor et al's No. 1 St. John, NW SE SE Sec. 27-8-25w.. Rig.

GRANT COUNTY

McKenna et al's No. 1 Sullivan, NE cor. Sec. 12-29-38w.. Rig.

GREENWOOD COUNTY

C. L. Mahan's No. 1 Binns, SE NW, Sec. 23-27-11..... Drlg. 775 ft.
John Harwood's No. 1 Good, C SW NW NE Sec. 36-25-9 ..... Shut down 1,220 ft.
Mallory's No. 1 Denchfield, SE NW Sec. 12-27-9 ..... Shut down 660 ft.
Bundy, Smith & O'Neil's No. 1 Ford, NE NW Sec. 28-25-13 ..... Shut down 50 ft.
F. Konkay et al's No. 1 Rock, NW NE NE Sec. 7-27-12.. Drlg. 1,820 ft.

HARPER COUNTY

Beeler et al's No. 1 Bear, C NE Sec. 21-31-6w ..... Shut down 1,830 ft.

HARVEY COUNTY

Gypsy Oil Co.'s No. 1 Hege, SE NW SE Sec. 13-22-2w.... Drlg. 1,125 ft.
Gypsy Oil Co.'s No. 1 Shine, SE SW, Sec. 26-22-3w .... Drlg. 2,913 ft.

KIOWA COUNTY

Phillips-Prairie's No. 1 Bean, NE SE, Sec. 10-30-17w.... Rig.
McKenna et al's No. 1 Ralson, C NE Sec. 14-28-20w..... Rig.

LINN COUNTY

Ferguson & Hiatt's No. 1 Carple, NE SE SW Sec. 22-21-22 ..... Rig.

LYONS COUNTY

Aladdin & Phillips' No. 1 Ratcliff, SW cor. Sec. 29-20-10. Drlg. 2,240 ft.

MARION COUNTY

Marshall et al's No. 1 Higgins, NE cor. Sec. 33-19-5 .... Rig.

MARSHALL COUNTY

Swicker & Sincox's No. 1 Remple, C N half NW Sec. 22-4-9 ..... Drlg. 1,000 ft.
Brazier et al's No. 1 Runkel, SE NW Sec. 13-2-6 ..... Rig.

McPHERSON COUNTY

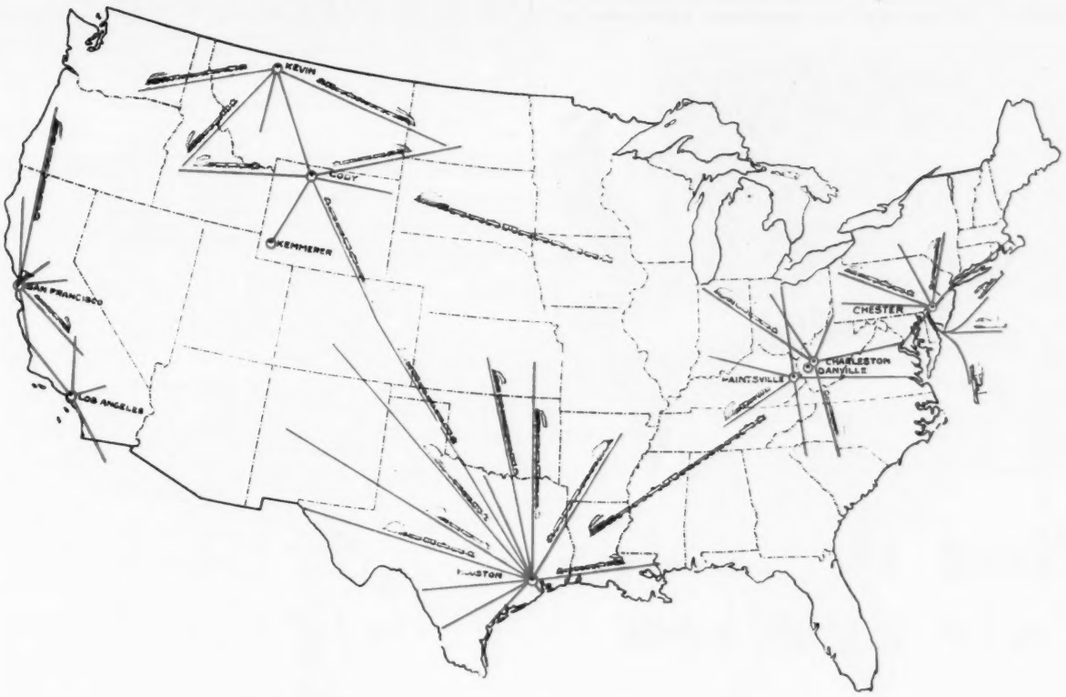
Harry Skelly et al's No. 1 Neufeldt, SE NE Sec. 19-21-3w ..... Rig.
Milmac's No. 1 Decker, NW cor. Sec. 11-20-3w ..... Drlg. 2,745 ft.

MIAMI COUNTY

Clark's No. 1 Vaughn, SE SW Sec. 28-17-22w ..... Drlg. 400 ft.

MORTON COUNTY

Argus Prod. Co.'s No. 1 Little, C SE Sec. 24-34-40w..... Location.
Argus Prod Co.'s No. 1 Watson, C NE, Sec. 27-34-40w.... Location.
Argus Prod. Co.'s No. 1 Mangle, C SW, Sec. 6-34-39w.... Location.
Argus Prod. Co.'s No. 1 Thompson C SW, Sec. 7-34-39w... Location.
Argus Prod. Co.'s No. 1 Rolla State Bank, C NW, Sec. 8-34-39w ..... Location.



To Insure Prompt Service

The South Chester Tube Company has established distributing centers throughout the oil and gas fields of the United States. We carry large stocks at Houston, Texas; Thenard, California; Cody and Kemmerer, Wyoming; Kevin, Montana; Paintsville, Kentucky; Charleston and Danville, W. Virginia. From these strategic distributing centers we can provide prompt service to most points in the oil fields with casings and line pipe.

It has been our aim, for over thirty years, to produce casing and line pipe of the highest quality and workmanship—and at the same time maintain the quickest and best service possible to every customer.

We also specialize in double length line pipe, of which the welds are as strong as the metal of the pipe.

South Chester Tube Company— Chester, Pa.

District Sales Managers:

W. E. Gibson
801 Columbia Bank Bldg.,
Pittsburgh, Pa.

H. A. Morse
30 Church St.
New York City

J. P. Cooney
715-716 A. G. Bartlett Bldg.,
Los Angeles, Cal.

J. P. Steele
305 Petroleum Bldg.
Fort Worth, Texas

District Offices:

J. D. Swartz, 1231 S. Evanston St., Tulsa, Oklahoma
H. S. Chancey, 2218 Mills St., Houston, Texas
E. L. Moseley, 3114 Tenth Street, Wichita Falls, Texas
District Warehouses: Houston, Texas; Thenard, Calif.; San Francisco, Calif.

Distributors:

Prichard Supply Co.
Mannington, W. Va.
Mather and Waynesburg, Pa.
LeValley, McLeod, Kinkaid Co., Inc.
Elmira and Olean, N. Y.

Petroleum Supply Co.
Houston, Tex., Norphlet, Ark.
Wagner Supply Co.
Fort Worth, Cross Plains, Breckenridge, Iraan, Wink, Forsan and Odessa, Texas.

United Pipe & Supply Co.
Charleston, W. Va.; Danville, W. Va.
Paintsville, Ky.
W. K. Henderson Iron Works & Supply Co.
Shreveport, La.
Pelican Well Tool & Supply Co.
Shreveport, La.

United Oil Well Supply Co.
712 A. G. Bartlett Bldg.,
Los Angeles, Calif.
Great Northern Tool & Supply Co.
Billings and Kevin, Mont.
Kemmerer and Cody, Wyo.

CHESTER

STEEL CASING

SPECIALISTS IN CASING FOR DEEP WELL DRILLING

LINE PIPE

WORLD NEWS STORIES OF THE KOHLER ELECTRIC PLANT—No. 15

One hundred and ten 2 K. W. 110-volt Kohler Electric Plants ready for shipment to the U. S. Government

guiding the ships of air and sea

THROUGH the night sweeps a powerful beam over land and sea, signalling safety to navigators of air and water. Confident eyes watch for these lights from the cockpits of mail planes; officers on the bridges of liners, freighters and private craft check and set their courses. Power from Kohler Electric Plants operates hundreds of these beacons and these lighthouses.

Over 1000 Kohler Electric Plants are in use by various departments of the U. S. Government. Of the latest shipment of 110, one hundred are being installed along the airways for visual and radio beacons and ten in lighthouses, giving reliable, automatic, independent electric power that safeguards life and property. Other governmental users include the Army and Navy, the Department of Justice (standard and emergency lighting for prisons and prison camps), National Park Service, Indian Irrigation Service, Commission of Forestry and the Coast Guard. Scores of these plants are used on cruisers and destroyers.

Kohler Electric Plants generate current at 110 volts D. C., or 3-phase 220 volts A. C. Capacities from 800 watts to 10 K. W. They make night work practical, safe and profitable. For floodlights, operating motors, pumps, air compressors, lathes, portable electric tools. Kohler Plants are compact, rugged, self-contained and can be transported over rough country without damage. They operate without storage batteries. For complete information, send the coupon today. Kohler Company. *Founded* 1873. Kohler, Wis.—*Shipping Point*, Sheboygan, Wis.—*Branches in principal cities.* . . . Manufacturers of Kohler Plumbing Fixtures.

KOHLER OF KOHLER
ELECTRIC PLANTS

O & G JRL 5-15-30

KOHLER CO., Kohler, Wisconsin
Gentlemen: Please send catalog describing Kohler Electric Plants.

*Name*_____ *Street*_____

*City*_____ *State*_____

*Use in which interested*_____

Argus Prod. Co.'s No. 1 Hayward C SW Sec. 9-34-39w...Rig.
Argus Prod. Co.'s No. 1 Thompson, C NW Sec. 18-34-39w. Location.
Argus Prod. Co.'s No. 1 Darth, C NE Sec. 20-34-39w ...Location.
Argus Prod. Co.'s No. 1 Haws, C SW Sec. 31-32-39w ...Location.
Argus Prod. Co.'s No. 2 Armstrong, C SW, Sec. 4-34-39w. Rig.
Argus Prod. Co.'s No. 1 Hayward, C SW, Sec. 9-34-39w..Location.
Argus Prod. Co.'s No. 1 Dixon, C SE, Sec. 18-34-39w.....Rig.
Argus Prod. Co.'s No. 1 Chambers, C NW, Sec. 25-33-40w. Rig.
Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22-34-43w .....Shut down 50 ft.
Argus Prod. Co.'s No. 1 Low, C SE Sec. 16-33-40w .....Rig on ground.

MORRIS COUNTY

Henderson et al's No. 1 Seisman, SW SE Sec. 24-16-9 ..Rig.
Urschell et al's No. 1 Scott, NE NW Sec. 6-16-6 .....Drlg. 2,115 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w .....Rig.

PAWNEE COUNTY

Skelly Oil Co.'s No. 1 Milhouse, C SE Sec. 34-23-17w ....Drlg. 1,250 ft.

PRATT COUNTY

O'Haver & Jones' No. 1 Garacke, C NE SW Sec. 7-26-14w .....4,560-65 ft. water; total depth 4,743 ft.; abandoned.
Wilcox O. & G. Co.'s No. 1 Bappin, SW NW Sec. 7-26-15w .....Drlg. 3,255. ft.

RENO COUNTY

C. A. Cheney and M. M. Valerius' No. 1 Stevens, C NE SE NE Sec. 6-26-7w .....Drlg. 2,870 ft.
Witt's No. 1 Olsen, C SE NW Sec. 14-22-6w .....Shut down 4,076-84 ft. water; shut down.

RICE COUNTY

Miller & Brown's No. 1 Schartz, Sec. 14-20-10w.....Rig.
Hoffner, Lee & Shell's No. 1 Slad Farm Corp. C SW Sec. 33-19-6w .....Location.
Tatlock et al's No. 1 Ploog, C SW SE Sec. 33-18-9w ....Shut down 50 ft.
Burgher's No. 1 Fair, C SE NE NE Sec. 14-21-10w ....Drlg. 3,790 ft.
Danciger et al's No. 1 Bell, C SW Sec. 16-19-8w .....Shut down 3,492-98 ft.; water.
McCulloch et al's No. 1 Williams, C NE Sec. 35-20-8w ..Drlg. 2,675 ft.

RILEY COUNTY

Grey et al's No. 1 Smith, NE SE Sec. 30-6-6 .....Shut down 1,970 ft.
Derby & Shaw's No. 1 Lindstrom, NE cor. Sec. 32-7-5e..Shut down 2,245 ft.

ROOKS COUNTY

A. H. Kruger's No. 1 Steis, NW SE SW Sec. 12-9-16w ..Shut down 570 ft.

RUSH COUNTY

Danciger Oil & Refining Co.'s No. 1 Nave, NW cor. Sec. 26-17-17w .....Total depth 3,606 ft.; shut down.

RUSSELL COUNTY

Empire and Prairie's No. 2 Ochs, SE NE Sec. 23-15-14w..Location.
Austin Drlg. Co.'s No. 1 Rockfellow SE cor. Sec. 6-13-12w. Shut down 425 ft.
Imo O. & G. Co.'s No. 1 Wambley, SE NW NE Sec. 7-14-14w .....Drlg 800 ft.
Gilbreath et al's No. 1 Bratton, C NE Sec. 33-11-13w ....Shut down 1,010 ft.

SEDGWICK COUNTY

T. C. Johnson's No. 1 Petrie, SW SE Sec. 35-26-1w ....Drlg. 3,185 ft.
Tavender et al's No. 1 McLean, SE SW SE Sec. 23-26-1w .....Shut down 975 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW, Sec. 20-13-4w .....Drlg. 1,000 ft.
Dixie Oil Co.'s No. 1 Miller, NE SE SE Seck 9-16-3w ..Drlg. 300 ft.

SHAWNEE COUNTY

Jenkins & Scott's No. 1 Sherman, NW NE Sec. 28-10-15 .....Shut down 985 ft.
Jenkins & Scott's No. 1 Haden, NE SE Sec. 8-12-14 ....Drlg. 1,560 ft.

SHERIDAN COUNTY

Mandalin O. & G. Co.'s No. 1 Unknown, C SE SW SW Sec. 27-7-26w .....Spudded; shut down.

STAFFORD COUNTY

Boucher Oil's No. 1 Christenson, NW cor. Sec. 22-22-11w. Shut down 565 ft.
Boucher Oil's No. 1 Groves, NE cor. Sec. 9-22-11w .....Drlg. 1,585 ft.
Midwest's No. 36 Richardson, SE cor. Sec. 36-22-12w ....Shut down 130 ft.
Gibson's No. 1 Mueller, C SW Sec. 11-23-14w .....Water 4,008-10 ft.; drlg 4,139 ft.

STEVENS COUNTY

Argus Prod. Co.'s No. 3 Armstrong, C SE Sec. 3-34-39w..Location.
Argus Prod. Co.'s No. 1 Roach, C NE Sec. 34-32-38w....Location.
Argus Prod. Co.'s No. 1 Asher, C NW, Sec. 7-35-37w....Rig.
Argus Prod. Co.'s No. 1 Barrow, C SW, Sec. 32-34-38w...Drlg. 600 ft.
Argus Prod. Co.'s No. 1 Gustafsen, C SW, Sec. 29-32-38w. Location abandoned.
Mangle et al's No. 1 Youngren, C SE NW Sec. 24-32-39w .....Spudding; shut down.
Argus Prod. Co.'s No. 1 Hicks, C SE Sec. 12-34-39w ....Drlg. 2,536 ft.
Argus Prod. Co.'s No. 1 Bride, C SW Sec. 25-33-37w ....Drlg. 1,252 ft.
Argus Prod. Co.'s No. 1 Cross, C SE Sec. 19-32-37w ....Drlg. 2,085 ft.
Argus Prod. Co.'s No. 1 Porter, C SE Sec. 21-32-37w ....Drlg. 1,670 ft.
Argus Gas Co.'s No. 1 Christopher, C SW Sec. 11-33-39w..Drlg. 2,496 ft.
Argus Oil Co.'s No. 1 Armstrong, CNL S half NW Sec. 16-34-39w .....Top salt 2,652 ft.; total depth 2,933 ft.; 8,500,000 ft. gas; completed.
Argus Oil Co.'s No. 1 Parker, C SW Sec. 19-34-36w ....Cleaning out 2,650 ft.
Argus Oil Co.'s No. 1 Smith, C SW Sec. 13-33-37w .....Completed 2,680 ft., 5,000,000 ft. gas.
McNabb et al's No. 1 Ramey, C SW Sec. 1-33-38w ....Drlg. 2,786 ft., 8,000,000 ft. gas.
Argus Gas Co.'s No. 1 Hobbe, C SE Sec. 17-32-37w ....5,000,000 ft. gas, 2,610-2,883 ft; completed.
W. Sidwell et al's No. 1 Kelly, SW cor. NE Sec. 16-34-38w .....Shut down 1,600 ft.

SUMNER COUNTY

Hatfield's No. 1 Dauber, NE cor. Sec. 18-30-1w .....Shut down 50 ft.
Slick et al's No. 1 Peasel, NW cor. Sec. 33-31-1w .....Chat 3,651 ft.; drilled to 3,668 ft.; drlg. deeper to Wilcox at 4,070-85 ft; landing casing; Silicious lime 4,110-14 ft.; water; total depth 4,163 ft.; plugged back to 3,670 ft.
E. K. Carey and Laredo Oil Co.'s No. 1 Welsch, SW SE Sec. 9-34-1e .....Wilcox 4,003 ft.; drlg 4,225 ft.
Davidson et al's No. 1 Strickland, SW cor. SE Sec. 12-35-1w .....Rig.

TREGO COUNTY

Dixie and Amerada's No. 1 Reitmayer, C NE NE Sec. 19-14-21w .....Drlg. 4,199 ft.
Day et al's No. 1 Guyler, SW NE NE Sec. 36-12-21w ....Shut down 50 ft.

WILDCAT OPERATIONS IN NEBRASKA

FRANKLIN COUNTY

U. R. Drlg. Co.'s No. 1 Brunkle (twin well), C NW SW NE Sec. 2-3n-13w .....Rig.

CHASE COUNTY

Chase Pet. Co.'s No. 1 Ingold, C NE Sec. 24-6n-38w ....U.R. 5-in. csg.; T.D. 4,365 ft.

FURNAS COUNTY

Southwestern Pet. Corp. of Nebraska's No. 1 Montague, SE SW SW Sec. 28-1n-22w .....Shut down 1,750 ft.
Graham Bros.' No. 1 Edwards, NW SW Sec. 13-2n-22w..Shut down 3,250 ft.

PHELPS COUNTY

Trees Oil's No. 1 Bergan, Sec. 22-6-19w .....Rig on ground.

RICHARDSON COUNTY

Norton et al's No. 1 Albin, NE cor. Sec. 26-1-14 .....10-in. csg. 1,600 ft.

ROCK COUNTY

North Central Dev. & Drlg. Co.'s No. 1 Leonard, SE cor. NE Sec. 14-32-18w .....Drlg. 900 ft.

WEBSTER COUNTY

Mid-Kansas Exploration Co.'s No. 1 Platt, C SE one-half Sec. 3-1n-11w .....Shut down 555 ft.

IT takes *courage* to be first—and *ability* to stay there. KEYSTONE was the *first copper alloy steel to be produced.* It gives maximum rust-resistance for tanks and sheet metal work in the oil fields.

KEYSTONE COPPER STEEL

IS UNEXCELLED

For Tanks, Barrels and Drums

AND FOR ROOFING AND SIDING

Used by prominent tank and drum manufacturers. Sold by leading sheet metal merchants. Send for ANTI-CORROSIVE METAL booklet.

Manufactured by

American Sheet and Tin Plate Company

GENERAL OFFICES: Frick Building, PITTSBURGH, PA.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

PRINCIPAL SUBSIDIARY MANUFACTURING COMPANIES:

AMERICAN BRIDGE COMPANY
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Pac. Coast Distributors—United States Steel Products Co.—Columbia Dept., San Francisco, Los Angeles, Portland, Seattle, Honolulu. *Export Distributors*—United States Steel Products Co., New York City

Spread G & B Pipe Sealing Compound on the male threads only, after making certain that all threads are absolutely clean. Just this will insure an impenetrable seal for the joint.

Keeps pipe joints leak proof . . .

Neither Gasoline nor Oil Can Seep Past G & B Pipe Sealing Compound

Here is a pipe sealing compound that sticks to its job through the hardest tests. Use it with the assurance that not a drop of gasoline or oil can leak away in your oil or gas pipe lines.

G & B Pipe Sealing Compound does not break down. It stands up as a perfect, permanent, insoluble joint-seal tomorrow or years from tomorrow. It lasts as long as the pipe is used. In handy packages G & B Pipe Sealing Compound comes in three convenient sizes, the ⅛ pint can at 15c; pint can at 75c; and the quart can for $1.45.

GILBERT AND BARKER
MANUFACTURING G&B COMPANY
PUMPS AND TANKS FOR THE OIL TRADE
SPRINGFIELD, MASS.

Visible Gasoline Pumps, mechanical measure or sight measure, hand or air operated, equipped with the famous NULTRA *bowls. Also piston type pumps with visible discharge. Pump and tank outfits for motor oils, including the popular "NARRO-LUBE" type. Special pipe sealing compound for gasoline and oil pump and tank installations.*

NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE
Week ending April 30

Carson County

Continental Oil Co.'s No. 3 B. F. Block, 330 feet south and east of the NW cor. SE, Section 111, Block 4, I.& G.N. Gulf Production Co.'s No. 2 B. F. Block, 330 feet north and west of the SE cor. NW, Section 111, Block 4, I.& G.N. McMan Oil & Gas Co.'s No. 3 J. L. Noel, 330 feet south and west of the NE cor. SE SE, Section 198, Block 3, I.&G.N. Osborne and others' No. 3-A F. E. Percival, 330 feet north and 290 feet west of the SE cor. E half NE, Section 199, Block 3, I.&G.N. Prairie Oil & Gas Co.'s No. 3 J. L. Noel, 330 feet north and west of the SE cor. NE SE, Section 198, Block 3, I.&G.N.

Gray County

LeFors Petroleum Co.'s No. 1 J. T. Wilson, 330 feet south and west of the NE cor., Section 1, B.S.&F. Nabob Oil Co.'s No. 1 J. S. Morse-D, 330 feet south and 990 feet west of the NE cor. N half NW, Section 54, Block 26, H.&G.N. The Texas Company's No. 7 McLarty and others-A, 330 feet north and 990 feet east of the SW cor. NW, Section 2, Block 1, A.C.H.&B. Same company's No. 4 S. W. McLarty-B, 990 feet south and west of the northeast corner of the J. M. Rose Survey. Humble Oil & Refining Co.'s No. 1 Peter Young, at the C SW, Section 110, Block 3, I.&G.N. Magnolia Petroleum Co.'s No. 9 J. E. Wright, 330 feet south and west of the NE cor. S half SW, Section 13, Block 3, I.&G.N. Phillips Petroleum Co.'s No. 1 J. B. Bowers, 990 feet north and 330 feet west of the SE cor. E half SW, Section 63, Block B-2, H.&G.N. Same company's No. 4 J. E. Wright (Wood), 375 feet north and 313 feet west of the SE cor. N half SW, Section 13, Block 3, I.&G.N. The Texas Company's No. 2 W. C. Archer, 330 feet north and 990 feet west of the SE cor. S half SE, Section 174, Block 3, I.&G.N. Same company's No. 3 J. E. Wright, 990 feet north and 330 feet east of the SW cor. SE, Section 13, Block 3, I.&G.N. Same company's No. 4 J. E. Wright, 990 feet south and 330 feet east of the NW cor. SE, Section 13, Block 3, I.&G.N.

Hutchinson County

Plains Holding Co. and Hagy's No. 1 Johnson Brothers, 990 feet south and 330 feet west of the NE cor. W half SE, Section 37, Block Y. Plains Holding Co. and Hagy's No. 1 Johnson Brothers-B, 330 feet north and east of the SW cor. of the north 60 acres of the east 80 acres of NW, Section 2, Block Y-2, T. T.R.R. Texas State Oil Co.'s No. 1 M. E. Dunnaway, 330 feet north and east of the SW cor. SW NE, Section 5, Block Y-2, T.T.R.R.

NORTH CENTRAL AND WEST TEXAS

Archer County

L. T. Burns' No. 7 R. W. Fails, 1,050 feet north and 150 feet west of the southeast corner of the north 42.5 acres of the south 72.5 acres of the R. W. Fails 122.5-acre tract out of Section 2,419, T.E.&L. L. T. Burns' No. 8 R. W. Fails, 150 feet north and 810 feet west of the southeast corner of the north 42.5 acres of the south 72.5 acres of the R. W. Fails 122.5-acre tract out of Section 2,419, T.E.&L. Burns & Long's No. 3 G. Symank, 150 feet south and 450 feet east of the NW cor. of the south 20 acres of SW, Section 11, G. P. Meade Subdivision, L. M. Pasture. Campbell Oil Corp.'s No. 1 Mrs. P. A. Carr, 150 feet north and 375 feet west of the southeast corner of the west 80 acres of the east 130 acres of the Mrs. P. A. Carr 215-acre tract out of Section 7, B.B.B.&C., A-48. Carter & Wright's No. 1 S. Wilson estate, 3,038 feet north and 1,050 feet east of the SW cor., Section 2, S.P.R.R., A-859. Coombs & Rogers' No. 1 Mrs. E. P. Bounds, 810 feet north and 150 feet west of the southeast corner of the Mrs. E. P. Bounds 94.98-acre tract out of the B.B.B.&C. Survey, A-54. C. W. Gilliland and others' No. 3 G. Symank, 150 feet north and east of the SW cor. N half SW, Section 11, G. P. Meade Subdivision, L. M. Pasture. Kruger and others' No. 2 G. A. Lauster, 150 feet south and west of the NE cor. NW SW, Section 3, B.B.B.&C., A-51. Moran Drilling and Independent Oil & Gas Co.'s No. 4 S. L. Scott, 150 feet north and east of the southwest corner of the south 40 acres of the east 50 acres of the west 80 acres of the S. L. Scott 163.5-acre tract out of the T. E. James Survey, A-938. G. L. Pace's No. 1 Charles S. Arnold, 150 feet north and west of the southeast corner of the west 100 acres of the south 200 acres of the Charles S. Arnold 400-acre tract out of the Joseph Levine Survey, A-259. Perkins & Cullum's No. 1 Campbell Bank Co. (Maben), 150 feet south and east of the NW cor., Section 13, South Anderson Ranch Subdivision and located in Section 2,419, T.E.&L. Riner & Omohundro's No. 1 W. R. Farmer, 1,333 feet north and 4,112 feet east of the southwest corner of the Bell County School Land, A-12, being 150 feet north and 830 feet east of the SW cor. NE, Lot 57, J. J. Perkins Subdivision.

Baylor County

Consolidated Oil Co. and others' No. 16 W. H. Portwood, 750 feet north and 150 feet west of the SE cor. SW, Section 1,281, T.E.&L.

Brown County

Holder & Heasley's No. 1 A. A. Moore, 150 feet south and 750 feet west of the northeast corner of the R. F. DeBord Survey. W. Preston and others' No. 1 W. F. Curry, 1,357 feet south and 1,585 feet west of the northeast corner of the J. A. Wright Survey No. 632. E. L. Smith Oil Co.'s No. 22 Mrs. L. A. George, 1,750 feet north and 783 feet east of the southwest corner of its lease out of Section 42, H.T.&B. Same company's No. 1 J. C. Suttles, at the center of the J. C. Suttles 100-acre tract out of the J. Padillo Survey No. 646. Ungren-Frazier and others' No. 1 H. B. Eddington, 450 feet south and 1,320 feet east of the NW cor., Section 21, Comal County School Land.

Ungren-Frazier and others' No. 1 J. E. Harrell, 150 feet north and 1,320 feet east of the SW cor., Section 36, Comal County School Land. Ven-Mex Oil Co.'s No. 9 R. Hickman-D, 150 feet south and 450 feet west of the northwest corner of their 48-acre lease out of the J. McGloin Survey No. 801.

Clay County

R. Dawson's No. 1 R. L. Robinson, 1,000 feet north and east of the SW cor., Section 21, Parker County School Land, A-374.

Coleman County

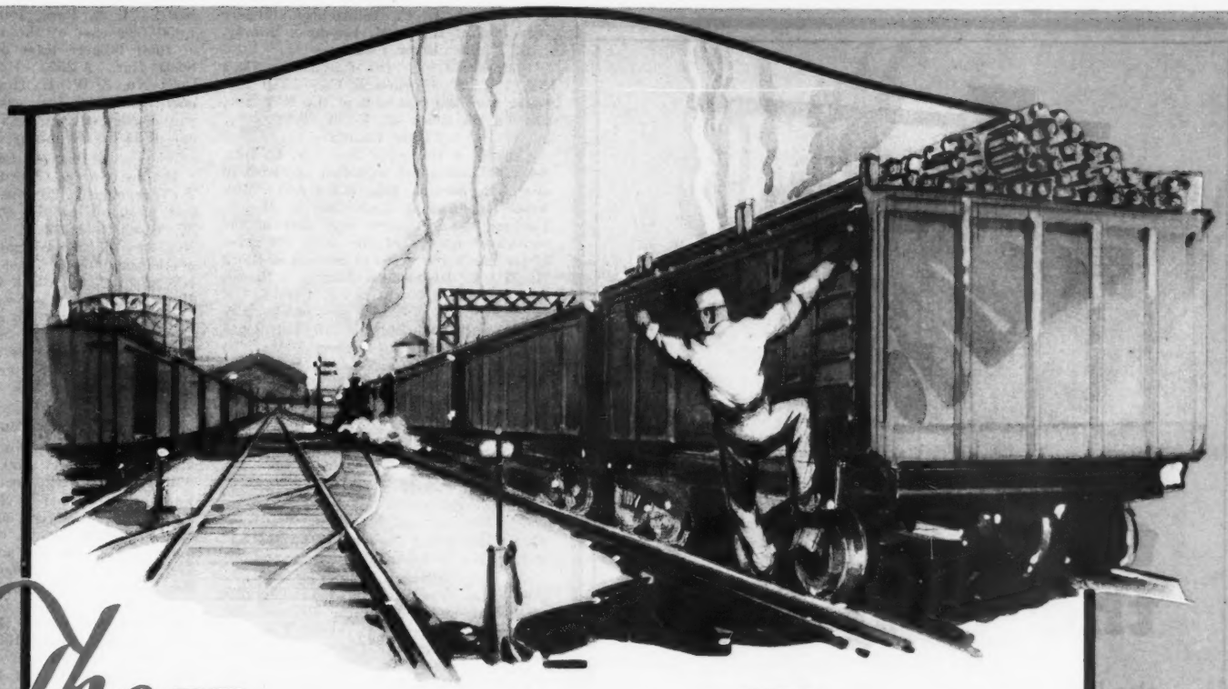
Coleman Gas & Oil Co.'s No. 1 W. C. Holt estate, 1,786 feet north and 2,439 feet west of the southeast corner of the W. C. Holt estate 560-acre tract out of the M. A. Fisk Survey No. 630. John Conners and others' No. 1 J. W. Roberts, 1,992 feet south and 1,120 feet east of the northwest corner of the O. H. Gibbs Survey No. 154. P. Fleeger and others' No. 1 W. L. Underwood, 730 feet south and 200 feet east of the northwest corner of the W. L. Woodward tract out of Section 88, C. T. Pendleton Survey No. 274. Gutzman & Aldrich's No. 2 Sealy & Smith, 500 feet south and 1,360 feet west of the NE cor., Section 87, Block 1, G.H.&H.

Crane County

C. C. Duffey's No. 1 Cowden Brothers & Co., 1,280 feet northeast of the southwest line and 660 feet northwest of the southeast line of Section 31, Block 2, H.&T.C. Gulf Production Co.'s No. 76 J. T. McElroy, 2,762 feet south and 2,970 feet east of the northwest corner of Gulf Production Co.'s leases out of Section 200, Block F, C.C.S.D.&R.G.N.G. R.R.

Erath County

J. C. Dorris and others' No. 1 J. R. and J. F. Whittenton, 500 feet north and west of the southeast corner of the



The HAZARDS of DAMAGE to THREADS

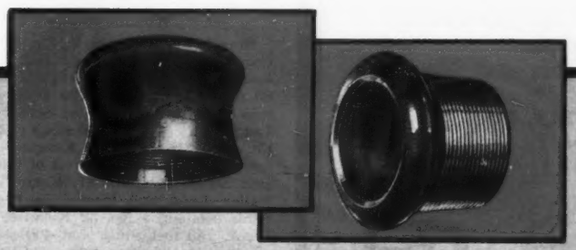
Consider how delicate are pipe threads and couplings—how the slightest blow will burr the threads of the best pipe. Then think how many, many times oil field pipe must be handled from pipe mill to destination—how many careless irresponsible hands it goes through before delivery—how it is banged on concrete sidings and dragged in sand and dirt.

NO WONDER COLONA THREAD PROTECTORS are recognized by most leading pipe manufacturers as vitally necessary to insure pipe delivery in the same perfect condition that it leaves the mill.

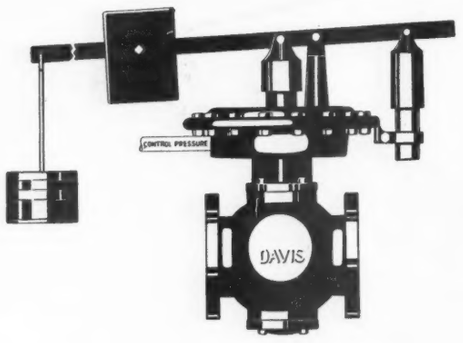
With these patented protectors readily available to every pipe manufacturer, ONE OF THE BEST EVIDENCES OF A PIPE MANUFACTURER'S CARE AND PRIDE in their product is the use of Colona Pipe Thread Protectors—the only type that gives 100 percent protection to both ends of the pipe.

Buy Colona Protected Pipe with confidence—specify Colona Protection in your order requisitions—it will save you much future annoyance and needless expense on pipe deliveries.

PITTSBURGH SCREW & BOLT CORP.
COLONA DIVISION **PITTSBURGH, PA.**



COLONA PIPE THREAD PROTECTORS



You can't tell the depth of the well by—

the length of the handle on the pump, but a movement of the handle quickly indicates whether or not the pump is functioning properly.

Similarly, with the Davis Gas Pressure Regulator—you can test its action by simply raising the counterweighted lever. That makes for peace of mind.

This regulator accurately handles reductions in pressure from 250 lbs. down to any required service pressure. It has a balanced disc; maintenance is infrequent but easy; high pressure fluctuations are negligible; and it gives a smooth, accurate flow.

A full range of sizes is available to suit all conditions. Our engineers will plan an efficient layout for you without obligation.

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TULSA LOS ANGELES HOUSTON DALLAS

Automatic valve makers for over fifty years

DAVIS VALVE SPECIALTIES

OGJ 5-15 Gray

J. R. and J. F. Whittenton 60-acre tract out of the J. M. Espinosa Survey.

Ector County

Southern Crude Oil Purchasing Co.'s No. 1 J. M. Cowden & Co., 2,310 feet south and 330 feet east of the NW cor., Section 26, Block 43, T-1-N, T.&P.

Fisher County

Cranfill & Reynolds' No. 2 N. G. Barrett, 330 feet south and east of the NW cor. NE, Section 199, B.B.B.&C. Midwest Exploration Co.'s No. 1 R. M. Decker, 330 feet north and east of the southwest corner of the west 80 acres of the north 160 acres of Section 8, Block R, W. E. Richardson Survey. Roeser & Pendleton's No. 1 J. J. Steele, 660 feet south and 440 feet east of the NW cor. N half SW, Section 210, B.B.B.&C.

Glasscock County

F. H. E. Oil Co.'s No. 3 D. Roberts-C, 2,134 feet north and 2,440 feet east of the SW cor., Section 156, Block 29, W.&N.W.R.R. Kirby Petroleum Co. and others' No. 6 J. W. Baker, 2,310 feet south and 990 feet east of the NW cor., Section 23, Block 33, T-2-S, T.&P.

Jack County

Rathke Oil Co.'s No. 1 W. B. Munson, 2,300 feet south and 330 feet west of the northeast corner of the B.S.&F. Survey No. 3, A-82.

Mitchell County

Gant & Teas' No. 1 O. Handley, 330 feet south and west of the NE cor. SE, Section 12, Block 28, T-1-N, T.&P.

Montague County

Arco Oil Co.'s No. 3 Mrs. M. H. Salman-E, 450 feet north and 950 feet west of the southeast corner of the south 100 acres of the Mrs. M. H. Salmon 421-acre tract out of the F. Robertson Survey, A-620. Bridwell Oil Co.'s No. 4 J. S. Dennis, 600 feet south and 950 feet west of the northeast corner of the J. S. Dennis 383-acre tract out of the F. Robertson Survey, A-620. Hunter Oil Corp.'s No. 1 B. H. Henley, 955 feet south and 150 feet east of the northwest corner of the B. H. Henley 100-acre tract out of the Ed O'Connor Survey No. 10, A-580.

Palo Pinto County

Brazos River Oil & Gas Co.'s No. 2 Brazos River Oil & Gas Co., 300 feet southwest of the northeast line and 642 feet northwest of the southeast line of the Brazos River Oil & Gas Co. 87.5-acre tract out of the J. T. Smith Survey, A-410. J. McLester's No. 1 A. P. Wilber, 3,450 feet south and 3,600 feet west of the northeast corner of the J. Latham Survey, A-279.

Pecos County

Gulf Production Co.'s No. 31 I. G. Yates, 1,105 feet north and 7,443 feet east of the southwest corner of the Runnels County School, A-2,169.

Shackelford County

Holder and others' No. 1 R. L. Boyett-A, 950 feet north and 150 feet east of the SW cor. SE, Section 55, Blind Asylum Land. King and others' No. 2 M. J. Brewster, 527 feet south and 450 feet east of the NW cor. SW, Section 48, Blind Asylum Land. T. K. Simmons' No. 4 B. C. Harvey, 1,020 feet south and 300 feet west of the NE cor., Section 5, Block 14, T.&P. E. J. Stump and others' No. 2 M. J. Brewster, 793 feet south and 450 feet east of the NW cor. SW, Section 48, Blind Asylum Land.

Wichita County

Staniforth and others' No. 5 R. L. Crudup, 1,050 feet south and 150 feet east of the northwest corner of the east 60 acres of the north 100 acres of Section 10, Denton County School Land, League 4, A-417. Arkansas Fuel Oil Co.'s No. 31 Kemp & Kempner-A, 150 feet south and 800 feet west of the southeast corner of Block 81, Kemp Wichita Valley Land and located in Block 82. Same company's No. 32 Kemp & Kempner-A, 750 feet south and 400 feet west of the southeast corner of Block 81, Kemp Wichita Valley Land and located in Block 82. R. R. Clark's No. 3 W. P. and J. F. Bickley, 2,100 feet south and 1,783 feet west of the NE cor. W half, Section 2, C.&M., A-594. T. H. Hunter's No. 1 J. L. and T. J. Waggoner-I, 1,357 feet south and 450 feet west of the northeast corner of Lot 20, H. George Survey, A-454. Omohundro and others' No. 24 J. R. Pace, 750 feet south and 1,050 feet east of the northwest corner of their 60-acre lease out of the R. J. Scott Sur., A-255. United Production Co.'s No. 3 W. L. Hodges-B, 150 feet north and 500 feet east of the southwest corner of their 38.72-acre lease "B" out of H.T.&B. Survey No. 1, A-139.

Wilbarger County

Empire Gas & Guel Co.'s No. 23 W. T. Waggoner-A, 298 feet north and 805 feet west of the SE cor. NW, Section 32, Block 4, H.&T.C. Same company's No. 24 W. T. Waggoner-A, 285 feet north and 967 feet east of the SW cor. NW, Section 32, Block 4, H.&T.C. Fain-McGaha Oil Corp.'s No. 34 W. T. Waggoner-S, 475 feet south and 550 feet east of the NW cor. NE, Section 24, Block 4, H.&T.C. Simms Petroleum Co.'s No. 1 J. P. Ayers, 1,983 feet south and 450 feet east of the NW cor., Section 8, Block 5, H.&T.C.

Young County

Bridwell Oil Co.'s No. 3 J. B. Daniels, 150 feet north and 450 feet east of the SW cor. N half SE, Section 164, T.E.&L. Campbell Oil Corp.'s No. 1 J. W. and J. S. Shaw, 150 feet north and west of the southeast corner of the north 80 acres of the east 160 acres of the J. W. and J. S. Shaw 240-acre tract out of Section 314, T.E.&L. C. W. Clark's No. 1 Wieburg, 2,750 feet south and 1,200 feet west of the NE cor., Section 157, T.E.&L., being 150 feet south and east of the northwest corner of Block 11, and located in Lot 4, Olney Development Co. addition, town of Olney. G. Cooper and others' No. 2 Junker-Benson, 450 feet south and west of the NE cor. NW, Section 157, T.E.&L., being 150 feet north and 450 feet west of the southeast corner of their 20-acre lease. Halmack Oil Co. and others' No. 5 J. D. Carpenter, 450 feet north and 150 feet west of the SE cor. N half SW, Section 164, T.E.&L. W. H. Hammon's No. 1 D. L. Keith, 150 feet north and east of the SW cor. NE, Section 28, T.E.&L. Hunter Oil Corp.'s No. 2 H. Benson-B, 708 feet south and 150 feet west of the NE cor. NW, Section 157, T.E.&L., being 108 feet south and 150 feet west of the northeast corner of its 6-acre lease. T. F. Hunter and others' No. 1 Leberman, 2,750 feet south and 1,550 feet west of the NE cor., Section 157, T.E.&L. being 150 feet south and west of the northeast corner of Block 39, Olney Development Co. addition, town of Olney. Kliner and others' No. 1 E. M. Remington, 150 feet south and east of the NW cor. E half SW, Section 2,248, T.E.&L. E. B. Madden's No. 1 E. B. Madden, 2,750 feet south and 825 feet west of the NE cor., Section 157, T.E.&L., being 150 feet south and east of the northwest corner of Block 10, and located on Lot 7, Olney Development Co. addition, town of Olney. R. E. Moore and others' No. 1 West, 1,700 feet south and 600 feet west of the NE cor., Section 157, T.E.&L., being 150 feet south and east of the northwest corner of Block 2, and located on Lot 6, Dunagan addition, town of Olney. Panhandle Refining Co.'s No. 1 E. C. Keith, 150 feet north and west of the SE cor. N half, Section 268, T.E.&L.

Panhandle Refining Co. and others' No. 2 J. D. Lowe, 150 feet north and 450 feet east of the SW cor. N half NW, Section 250, T.E.&L. Perkins & Cullum's No. 8 E. J. Dunagan, 450 feet north and 750 feet east of the southwest corner of the E. J. Dunagan 65-acre tract out of Section 157, T.E.&L. Perkins & Cullum's No. 9 E. J. Dunagan, 750 feet north and 450 feet east of the southwest corner of the E. J. Dunagan 65-acre tract out of Section 157, T.E.&L. Perkins-Cullum & Anderson's No. 1 Cox, 1,700 feet south and 850 feet west of the NE cor., Section 157, T.E.&L., being 140 feet south and 150 feet east of the northwest corner of Block 3, and located on Lot 7, Dunagan addition, town of Olney. Perkin-Cullum & Anderson's No. 1 Daniel, 1,975 feet south and 1,200 feet west of the NE cor., Section 157, T.E.&L., being 150 feet south and east of northwest corner of Block 14, and located on Lot 5, Olney Development Co. addition, town of Olney. E. R. Riggs'

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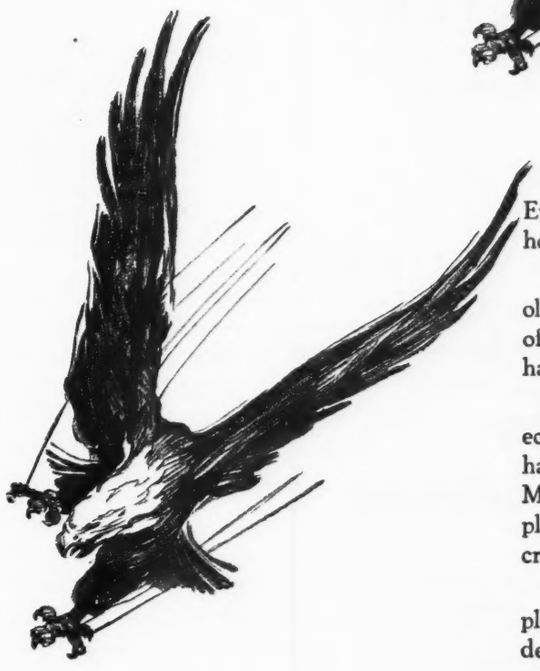

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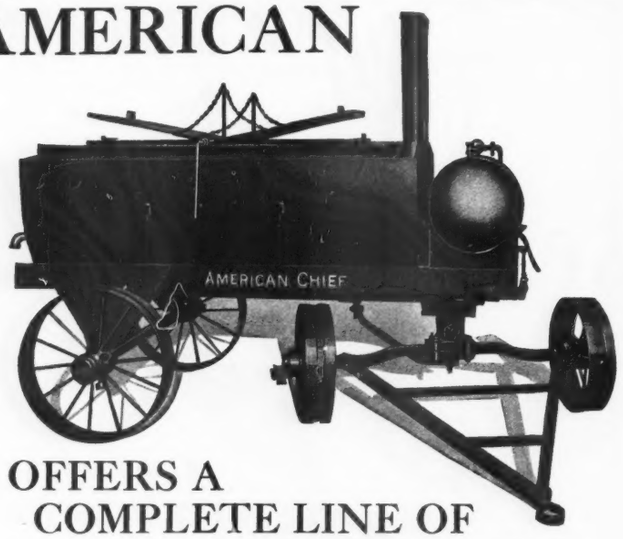

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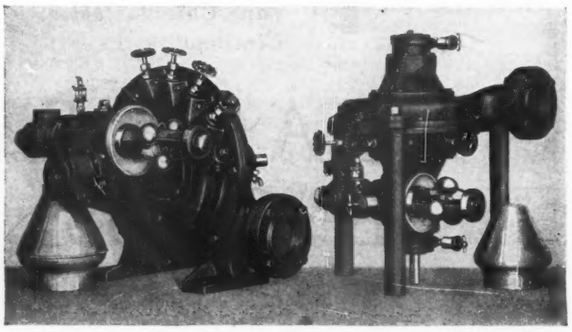

Horizontal ¼ to 60 H. P. Vertical

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No. 3 B. H. Larimore and others, 150 feet north and east of the SW cor., Section 2,247, T.E.&L. Riner & Omohundro's No. 3 E. C. Keith, 150 feet north and 450 feet west of the southeast corner of the north 20 acres of the east 60 acres of the south 160 acres of Section 268, T.E.&L. T. B. Slick's No. 1 W. W. Williamson, 330 feet south and east of the NW. cor., Section 458, T.E.&L. Smith-Archer Drilling Co.'s No. 1 B. Hawkins, 1,425 feet north and 1,050 feet west of the SE cor., Section 1,914, T.E.&L. being 150 feet south and 1,050 feet west of the northeast corner of its 40-acre lease. The Texas Company and Consolidated Oil Co.'s No. 2 J. D. Carpenter. 150 feet north and west of the SE cor. NW, Section 164, T.E.&L. L. G. Bradstreet and others' No. 1 W. B. Hinson, 315 feet south and 330 feet west of the most easterly northeast corner of the P. Pier Survey, A-219. L. A. Long and others' No. 1 J. J. Fawks, 1,550 feet north and 780 feet east of the southwest corner of the J. Newby Survey, A-1,500.

Corrections

Brown County—Texas Unity Oil Co.'s No. 2 R. W. Miers, 150 feet south and 450 feet east of the most westerly northwest corner of the S.A.&M.G. Survey No. 3, A-851. Bush & Roberts' No. 2 J. L. Richardson, 1,020 feet north and 1,390 feet west of the southeast corner of the S.A.&M.G. Survey, A-1,233.

VAPOR PRESSURE AND DISTILLATION DATA

(Continued from Page 41)

"B" factor should be the more desirable, since this would indicate more than the normal inclusion of pentanes at the expense of butanes and lighter.

The normal differences between the "A" and "B" factors for the motor fuels studied in this survey were as follows:

Lbs. per Sq. In. Vapor Pressure of Motor Fuel	Difference Between "A" and "B" Factors*	"A" Factor†
5	7.1%	2.7%
7	7.9%	4.2%
9	9.6%	5.8%
11	12.6%	7.4%
13	17.0%	9.0%

*The percentage of pentanes fraction in motor fuel. †The percentage of butanes and lighter in motor fuel.

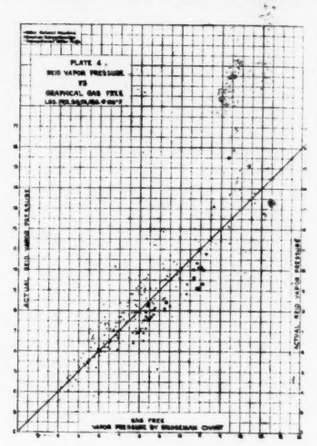
Work of Doctor Bridgeman

Coincident with the development of this graphical method, Dr. O. C. Bridgeman and his associates in the Bureau of Standards have done some highly constructive work on vapor pressure and its graphical prediction by another means of evaluating the A.S.T.M. distillation. The vapor pressure method used by the Bureau of Standards as a basis for comparison was a laboratory method termed the "gas-free" vapor pressure. In Doctor Bridgeman's work, the 10 per cent evaporated temperature is also the starting point, but the correction for deviation in the characteristics is based on a determination of the slope of the A.S.T.M. curve at the 10 per cent point. Hence, a flat curve will yield somewhat different results than one in which the slope is steep.

The vapor pressures of the 184 fuels used for the graphical method of this paper were determined by the use of Doctor Bridgeman's graphical method. These results were plotted against the laboratory Reid determinations with the result appearing on Chart 4.

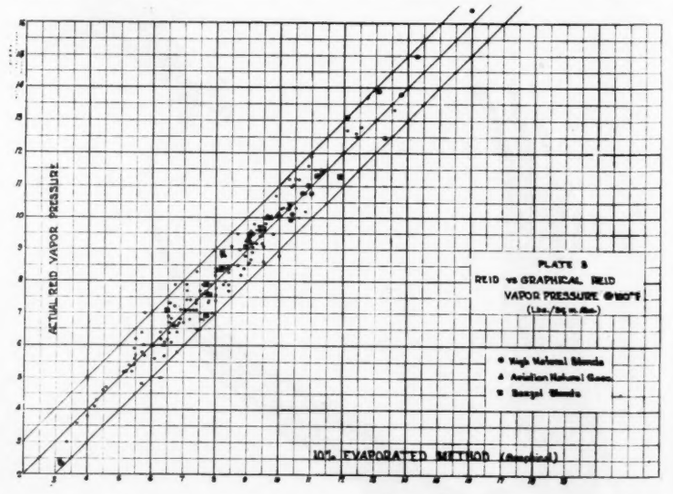
In addition to these 184 samples, the 35 samples of motor natural gasolines, shown in Table 3, are added to the comparison on Chart 4.

It will be noted that for most of the 184 samples, the actual Reid determination is higher than the calculated vapor pressure of Doctor Bridgeman's graphical method. In Doctor Bridgeman's work, he has considered it necessary to multiply the actual Reid by the factor 1.1, in order to make it coincide with his actual gas-free vapor pressure. If this were done in the case of the 184 samples in question, the deviation between the two would be much greater than without applying any correction to the actual Reid values.



These 184 samples represent almost any condition to be met in practice.

There is one type of fuel represented in this group by Phillips "66," in which the actual Reid value is consistently lower than the graphical "gas-free" vapor pressure by Doctor Bridgeman's method. The actual Reid values of these fuels multiplied by the factor 1.1 will quite closely approximate the graphical "gas-free" vapor pressure in many instances, while the average of these actual Reid values multiplied by 1.1 checks the graphical "gas-free" vapor pressures to within 0.032 pounds per square inch.



The fact that nearly all of the samples, other than the motor natural gasolines, used in this survey had actual Reid vapor pressure values higher than the graphical "gas-free" values indicates the possibility of a marked difference in

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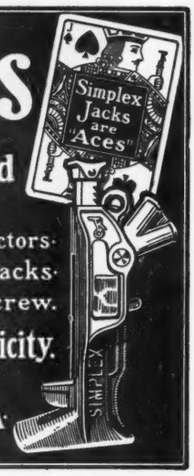

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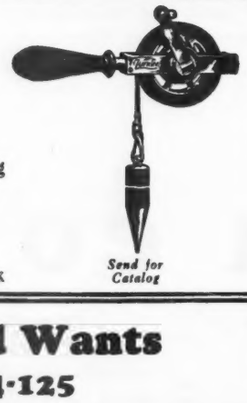

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the charasteristics of the gasolines used for the two investigations.

Procedure and Results

The samples of gasoline used for this survey were collected from filling stations throughout a large part of the United States. They were drawn into one gallon sample cans, which were sealed and shipped to the laboratory by express.

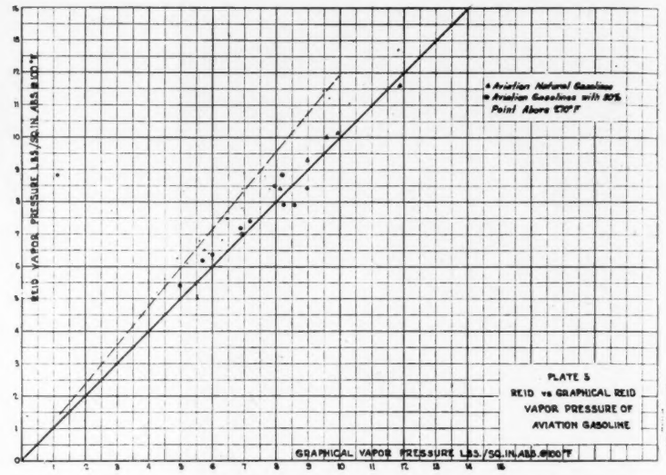
In the laboratory the gasolines were chilled to temperatures well below 60° F. before being opened to pour samples for the A.S.T.M. distillation. In a great majority of cases these samples were actually poured at temperatures between 55 and 60° F. However, there were 42 of the samples included which were chilled to 32° F. and measured at temperatures of 40° F. or lower.

The vapor pressure samples were subsequently placed in the bomb by pouring from the original container. In all cases the contents of these containers were cooled to 32° F. before the vapor pressure samples were poured.

It is to be noted that the A.S.T.M. distillation and the vapor pressure samples were withdrawn from the same container and that a reasonably uniform procedure as to conditions and sequence of sampling was followed. The sampling containers were well constructed and generally arrived at the laboratory free from evidence of leakage. The relationship established herein can be expected to be valid only where similar precautions for accuracy are observed.

Another condition of the experiments which might influence results in barometric pressure. The A.S.T.M. distillation tests described in this paper were conducted in a single laboratory, where the observed barometric pressure was usually between 745 and 760 mm. A.S.T.M. distillations at considerably lower barometric pressures (unless corrected for this factor) might be sufficiently influenced to affect the results of graphical vapor pressure determinations.

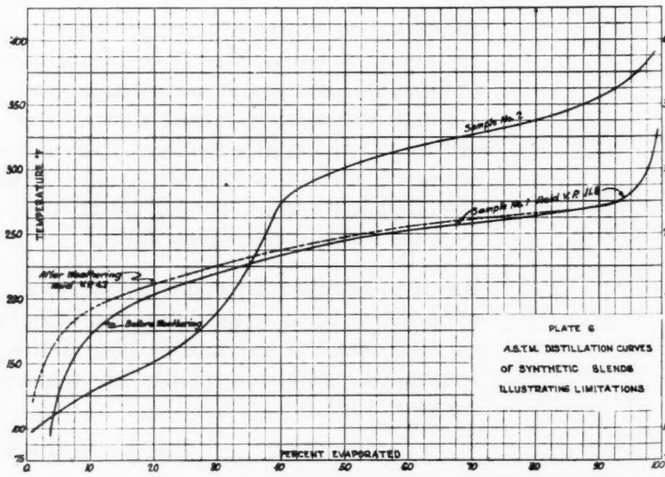
The Reid method for determining vapor pressure used is that specified in the recommendations by the vapor pressure committee of the American Petroleum Institute to the United States Bureau of Explosives with the following single exception. Due to the fact that all samples of the fuels were obtained in one gallon sample cans, the vapor pressure samples were obtained by pouring at 32° F. (liquid temperature) from the original container into the gasoline bomb of the vapor pressure apparatus. It is realized that for fuels having vapor pressures higher than 9.0 pounds per square inch this pouring temperature was not as low as specified in the recommendations published by the Bureau of Explosives. However, recent experiments, in which the type of bomb designated for sampling under pressure was used, failed to develop any data that would tend to show an appreciable error in the previous work.


REID VAPOR PRESSURE LBS./SQ.IN.ABS.@100°F
GRAPHICAL VAPOR PRESSURE LBS./SQ.IN.ABS.@100°F
PLATE 5
REID vs GRAPHICAL REID VAPOR PRESSURE OF AVIATION GASOLINE

The graphical method of estimating Reid vapor pressures has limitations beyond which accurate results can not be obtained. The following types of fuels do not yield accurate results:

1. Fuels containing relatively large percentages of propane, particularly when accompanied by a relative deficiency of butanes and pentanes. Such fuels have high A.S.T.M. distillation losses as compared with their A.S.T.M. 10 per cent evaporated temperatures. The difference between the "A" and "B" factors is abnormally low. The vapor pressure, graphically determined, will be lower than the actual Reid determinations.

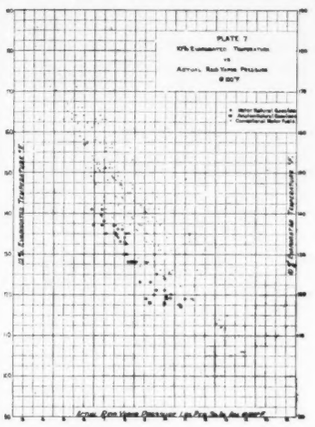
2. Fuels for which the A.S.T.M. distillation curves exhibit sharp rises in temperature following a low front end temperature range. These breaks usually occur beyond that portion of the curve which can be evaluated by the graphical



Reid vapor pressure method, and consequently result in lower actual vapor pressures than are predicted by the graphical method. The sharp rise in temperature in this type of blend usually indicates a deficiency of one or more of the hydrocarbon series from hexane to octane.

3. Fuels having unusually low A.S.T.M. 90 per cent evaporated temperatures, when accompanied by relatively high 10 per cent temperatures. The vapor pressures, graphically determined, will be lower than the actual Reid determinations.

Chart 6 shows the distillation curves of two synthetic fuels representing extreme examples of the types (1) and (2). Fuel No. 1 contained 3.0 per cent propane, traces of butanes and pentanes, 20.0 per cent hexanes, and the remainder octanes. The "A" and "B" factors were 5.7 per cent and 9.6 per cent respectively. The Reid vapor pressure graphically determined was 7.9 pounds per square inch. The actual Reid vapor pressure was 11.8 pounds per square inch. It is



to be noted that a normal fuel, having 8 pounds per square inch vapor pressure, would have an "A" factor of about 5 per cent and a "B" factor of 14 per cent. The slope of the line joining 5.7 per cent on the "A" factor axis and 9.6 per cent on the "B" factor axis in Chart 1 is very steep.

The dotted line on Chart 6 represents the A.S.T.M. distillation of this same fuel after the propane content had largely been allowed to weather to the atmosphere. The "A" and "B" factors for the dotted curve were 3.0 per cent and 7.3 per cent. These factors indicated a vapor pressure of 4.7, which was identical with a laboratory determination. It was necessary in this case to extrapolate some of the factors to complete this determination, since the 10 per cent evaporated temperature exceeded the maximum limit of the graph.

From a comparison of these two distillations it is evident that the influence of propane on the A.S.T.M. distillation is not sufficiently great to be used in graphically evaluating its pronounced effect on the vapor pressure of the mixture. Fuel No. 2 contained only traces of propane and butane, 30.0 per cent pentane, 5.0 per cent hexane, heptane and octane, and the rest of the sample was refinery naphtha. The "A" and "B" factors were 5.5 per cent and 21.2 per cent respectively. The Reid vapor pressure graphically determined was 9.2 pounds per square inch, while the actual Reid vapor pressure determined in the laboratory was 6.4 pounds per square inch. The condition that is responsible for the error is found in the fact that the portion beyond the "B" factor is of such a character, that it would be normal to a fuel having a 10 per cent evaporated temperature of 175° F. or more. This type of gasoline mixture represents such distorted values that it is readily recognized when plotted and the only safe way of arriving at the vapor pressure is through laboratory determinations.

It is noteworthy, in regard to these exceptional types of hydrocarbon mixtures, that of nearly one thousand samples of commercial motor fuel obtained from all parts of the country, not one of them exhibited the unusual characteristics outlined to such an extent as to preclude the use of the graphical method herein described. The exceptions had to be demonstrated by means of synthetic samples.

Mechanical Atomizing Principle Employed In New Pump Method

By L. E. McCune

A method of pumping which, unlike the reciprocating pump or air-lift pump, uses the principle of mechanical atomization to give a complete mechanical atomization and hydrostatic load relief, has been devised by Ralph H. Tucker. In the reciprocating type a longe pump rod extends downward to the pistons and transmits the reciprocating motion from rocker arms at the surface. The principle used is simply displacement. The air-lift method makes use of air under high pressure, which is conducted downward and then jetted back upwards under the oil column. The force of the air upward, as well as its mechanical combination with oil is the principle under which this method functions.

This third and modern principle makes use of rotary action. Air under pressure is ejected through angular portholes vanes, not unlike those of a turbine. This causes the rotating element to revolve at a rapid speed and any oil that presses through is split or atomized by the vanes. The exhausting air also imparts an upward motion to the oil. The pumping of the oil by this method actually makes use of a combination mechanical atomization and hydrostatic load relief.

Started Work 11 Years Ago

Mr. Tucker first developed this principle of lifting fluid for water well service and started work upon the design of this type of pump approximately 11 years ago when he began development of an air-lift system particularly adapted for wells along railroads in isolated locations. Six years ago he developed the first mechanical means of atomizing the water and oil, and introduced numerous improvements. A few months ago the first tests were made in very deep wells and some of these pumps were installed to a depth of approximately 5,000 ft.

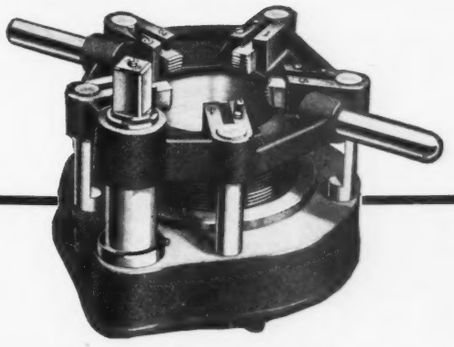
The operation of reciprocating plunger pumps with sucker rods necessitates the lifting of the fluid against the hydrostatic load. On the other hand, the air-lift method depends upon application of pressure to push upward and overbalance the hydrostatic load. Neither method actually pulls the oil up into the oil column.

Mr. Tucker decided that some apparatus could be designed to pull in the fluid and mechanically atomize it so that the load would be reduced. The result has been the design of what is called the Continental turbine air-lift pump. Some engineers consider the word "pump" a misnomer in that the mechanism does more than merely pump the oil by reason of the atomizing effect.

Principle Involved

Briefly, the principle of pumping oil by this equipment involves the application of a minimum pressure of either air or gas after the kick-off into an enclosed area within the bottom of tubing and its introduction into the pumping element through angled portholes. This pressure is trajected through tangential portholes and exerts its force upon a motor which operates not unlike a steam turbine. The motor within the pump is equipped with a continuous series of 41 angular faces or vanes.

An impeller or screw, integral with the motor, rotates, picking up the oil from the reservoir. The air or gas, leaving the motor through portholes, strikes the oil column at the top end of the pump and causes complete atomization, thoroughly mixing the gas or air with the oil. By using a restricted size of tubing at the top of the pump, the gas or air cannot slip. The oil rides along with the gas by means of atomization and is brought to the surface and delivered into tanks where the



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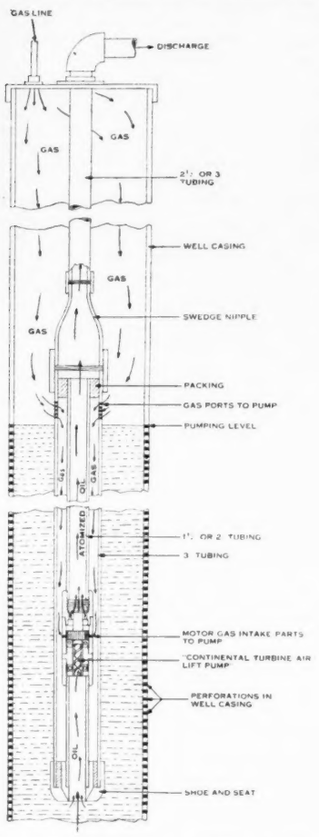
gas or air separates from the oil, leaving the latter solid liquid.

A peculiar advantage in the use of gas is the remarkable increase in the gravity of the oil. Much of the gas remains in the oil and on several tests it has been found that the increased value of the oil, due to its increased gravity, has more than paid for the operation of the pump.

In operating the pump a higher pressure is required in the kickoff but the pressure recedes after the atomized column of oil is built up. In other words, as the pumping level pulls down, the running pressure can be dropped, which is similar in principle to the operation of



an automobile in that the inertia is overcome by low gear and then by second gear and finally placed into high gear.

In the constructiton of this pump two sets of ball bearings are used below the motor, which serve only as a guide and have practically no thrust imposed upon them. Sand does not harm the bearings because of the powerful blower action of the gas or air. When the pump is stopped any sand in the column falls back through the opening and the greatest amount of sand that can lodge in the pump is hardly more than a thimbleful upon a ring that lifts up immediately when pressure is applied. It is believed that this pump will operate at any depth in any type of well and it is especially desirable in crooked holes where sucker rods cannot be satisfactorily used.

Construction Simple

The construction of this pump is simple. The complete pump in the 2½-inch size weighs less than 15 pounds without tubing. It can be deeply submerged to obtain more intake pressure but can be set at practically any level. Its setting depends upon the conditions of the well. The economy of the installation suggests its desirability at all types of wells, both shallow and deep.

Installation of the pump requires practically no special fittings other than the main pump element. At the bottom of the tubing a swaged nipple is used to convert the tubing to a larger size to permit insertion of 1½-inch or 2-inch tubing, which in turn allows for packing. The assembly below the swaged nipple is lowered to the pumping level so that the

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gas ports are immediately above the level, allowing the gas to enter the packed off area and in turn enter the pump. The oil intake is at the bottom, similar to any other pumping method.

The Continental Equipment Co., Subway Terminal Building, Los Angeles, is manufacturing the pump.

GEOLOGIST REPORTS ON MOOSE MOUNTAIN

CHATHAM, Ontario, May 10.—The Moose Mountain structure is north and west of the Turner Valley, and was examined last year by E. H. Cunningham Craig. In his report, Mr. Cunningham Craig, after discussing the light crudes and naphthas of the Turner Valley and the desirability of locating a field of normal crude oil, says in regard to the possibilities of the Moose Mountain structure:

"The most remarkable fact is that most of these socalled 'light crude' oils, and all the heavier examples, occur on the western flank of the Turner Valley flexure. This indicates clearly that the oil has migrated, generally speaking, from the westward, and is trapped, or partially trapped, in such structures at the Turner Valley anticline.

"Passing northward along the strike of the Waite Valley, the conditions improve as the flexure opens out, and are less affected by faulting. The Waite Valley structure splits into two definite anticlines of which the eastern is sharp and much faulted, while the western is broader and less affected by faulting. This western fold is known as the Elbow River, or Moose Mountain, anticline, and it has never been tested by the drill. Two or three attempts have been made to test it.

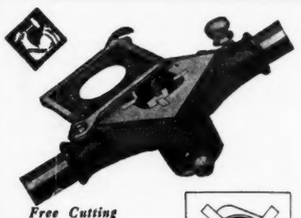
"The first and most important was the well drilled in Section 11-23-5w5. This well was, unfortunately, located too close to the crest of the flexure, and it passed across the crest into vertical beds about 2,700 feet, thus missing all hope of striking oil. Nevertheless, the well showed signs of oil for 700 feet before crossing the crest.

"The most favorable feature about this Elbow River structure is that to the west of it lies a broad unfaulted syncline which is well exposed on the Elbow River. This syncline gives a western flank of at least two miles in breadth to the anticline, which means that at the point where the Elbow Oil Co.'s well is being drilled there is a 'concentration area' of more than 3 miles in breadth.

"There is another feature that may prove of even greater importance; it has been established that the sandstone beds in the lower part of the Cretaceous formation thin out to the eastward and at the same time become less porous. In the distance of 6 miles between the strikes of the Turner Valley and the Elbow River Valley the increase in thickness and porosity of the sand beds may be very considerable, especially when it is remembered that the beds are highly folded, so that the original distance must have been much greater. There is proof from the British-Alberta well and from the Elbow Oil Co.'s well that the Dakota formation has thickened westward and contains thicker sand beds.

"A careful survey of all the evidence from the whole district points to the Elbow well, which has been very carefully located, being by far the most important exploratory test that is being drilled in the Calgary district; a success in this locality will prove a structure of great length and sufficient breadth to afford drilling sites for hundreds of wells. There is no doubt that any oil struck will be crude oil of excellent quality.

"Should the quantity of oil struck be of insufficient quantity in the lower Cretaceous strata, there is still the limestone to be reached at about 4,000 feet, and there is evidence to indicate that the dolomitization of the limestone will be more pronounced than in the Turner Valley, making it more porous and therefore a more efficient reservoir for wet gas and light filtered oil."



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Of Interest to Sales Departments

Large Increase in Fuel Oil Demand by Electric Utilities

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., May 12.—A marked increase in the consumption of fuel oil and natural gas by electric public utility power plants in the production of electricity in the United States was shown for the year 1929 over 1928. This was the result of a decrease in water power which is the chief controlling influence affecting the use of coal, fuel oil and natural gas for the generation of electricity by these plants.

The variations in the demand for fuel oil for this purpose during the last six years has been very great. Barrels of fuel oil consumed by electric public utility power plants in the production of electricity were in 1924, 16,630,000 bbls.; 1925, 10,246,000 bbls.; 1926, 26,400,000 bbls.; 1927, 6,782,000 bbls.; 1928, 7,126,000 bbls., and 1929, 10,079,000 bbls. It will be seen that 1927 showed a minimum use of fuel oil for this purpose.

Natural gas for electric power plants has steadily increased in consumption since 1925 when the quantity was 46,500,000,000 cubic feet. The following years all showed increases, 1926 being 53,200,000,000 cubic feet; 1927, 62,900,000,000 cubic feet; 1928, 77,174,000,000 cubic feet, and 1929 jumping to 112,847,000,000 cubic feet. The increase of natural gas in the replacement of coal and fuel oil to make up for the shortage of water power was on the Pacific Coast, when natural gas was selling in California at 5 cents per thousand feet and operators were required to sell the gas instead of allowing it to be blown into the air and wasted.

The use of coal by electric public utility power plants in the production of electricity has remained on almost the same level during the last 10 years although the quantity increased about 9 per cent in 1929 over the previous year. That was for the period of low water, which made such a large increase in the use of both fuel oil and natural gas. In 1919 coal was used to the extent of 35,000,000 tons, increasing in 1929 to 45,000,000 tons, while during that period the output of electricity by the public power plants from all fuel, including coal, oil and natural gas, was increased from 24,000,000,000 kilowatt-hours in 1919 to 62,000,000,000 kilowatt-hours in 1929. The total production of kilowatt-hours, including that produced from fuels and water power, was 97,352,000,000 kilowatt-hours, so that it will be seen in 1929 nearly two-thirds of kilowatt-hours were produced from fuels.

DISCUSS MARKET TREND

CHICAGO, May 12.—The Johnson Oil Refining Co. has just issued a pamphlet for distribution among the jobbers in which they discuss with much frankness the conditions confronting the independent distributor as a result of the merging of companies and the further development of the chain system in the oil business. The writer points out that the advantages which the major integrated companies may possess are quality of product, efficiency of management and profitable publicity. But he also claims that these are all possible to the efficient distributor who can through the mutual co-operation with a refiner be able to offer his customers and the public generally as good material as the best from any integrated company.

BUS TRAFFIC GROWTH SHOWN IN A.A.A. REPORT

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., May 10.—Facts and figures of the motor bus industry as of January 1, 1930, have been collected and will shortly be available through the American Automobile Association.

The figures showing common carrier bus miles as of January 1, 1930, for the preceding 12 months are of particular interest as they indicate an increase of 65,000,000 bus miles over those of January 1, 1929. This is a smaller increase than that recorded for successive previous years but this smaller increase was brought about to a large extent by the increased size of buses. In many instances seven-passenger buses have been replaced by buses carrying 25 and 30 persons.

There are no available figures showing gasoline consumption by buses but the increase in that respect must be judged largely by the increased number of bus miles. On January 1, 1926, common carrier bus miles for the previous year amounted to 1,178,000,000 miles, January 1, 1927, 1,360,000,000; January 1, 1928, 1,490,000,000; January 1, 1929, 1,685,000,000, and January 1, 1930, 1,750,000,000.

The increase of passengers carried as shown on January 1, 1930, over January 1, 1929, was much greater than the increase of bus miles owing to the fact that larger buses were in operation in the latter period. On January 1, 1929, the passengers carried during the preceding year aggregated 1,683,000,000 increasing to 1,855,000,000 as reported January 1, 1930, for the preceding 12 months.

The graphs prepared for this publication showed but a slight increase in the number of total common carrier buses for the 12 months prior to January 1, 1930, and electric railway buses showed greater increases in number and mileage as during that period, both electric and steam railroads were by purchase and otherwise increasing their bus service.

It has been stated that the average bus covers 50,000 miles a year but the forthcoming bulletin of the American Automobile Association will cut this figure down 20 per cent to allow for equipment held in reserve and not operating.

A bill has been passed by the House of Representatives and is pending in the Senate for the regulation of the bus industry and before it has been completed it will define conditions of transportation of persons by motor carriers operating on the public highways under regulations to be carried out by the Interstate Commerce Commission. This bill has been reported to the Senate by the Committee on Interstate Commerce and it is believed it will become a law before Congress adjourns. It provides for consolidations and mergers under the supervision of the commission.

GENERAL ENLARGES OUTLETS

LOS ANGELES, Calif., May 12.—The General Petroleum Corp. has purchased eight additional marketing companies within the past six weeks. Seven of these are located in Washington and include the Harbor Oil Co. of Aberdeen, Allan Lubricating Oil Co. of Tacoma, General Oil Co. of Yakima, Ropes and Martin of Mount Vernon, Mennard Oil Co. of Centralia, Dahlstrom Lubricating Oil Co. of Long View and the General Lubricating Oil Co. of Olympia. The Panhandle Oil Co. of Arizona is the eighth of this group to be purchased.

Estimate Value of Petroleum Coke at $7,000,000 Yearly

The annual value of the petroleum coke production of the country is placed at $7,000,000 according to the United States Bureau of Mines, Department of Commerce, which has conducted an economic survey of the subject. Petroleum coke is essentially a by-product of refining operations and can not profitably be produced except as the result of the manufacture of other products. Viewed as a raw material for further manufacture it is regarded as the purest form of industrial carbon available in large quantities and as such is essential to many important industries.

Production of petroleum coke in coking-still operations has remained fairly constant during recent years at approximately 350,000 tons annually, while the production of cracking-still coke has increased from approximately 200,000 tons in 1921 to nearly 1,100,000 tons in 1928, according to E. B. Swanson, economic analyst, who conducted the survey for the Bureau of Mines. Coking-still coke has a definite market as a raw material in the manufacture of electrodes and other carbon products and is shipped to foreign countries for similar use. On the other hand, cracking-still coke is used primarily as a fuel. A major portion of the cracking-still coke extracted from the reaction chambers of cracking stills is in fine sizes and is sold for industrial pulverized fuel use, at relatively low prices. If cracking-still coke is to become of increased importance in the industrial arts or is to bring a larger return to its producers, it should receive further treatment to reduce its volatile content, increase its strength, and provide uniformity in quality. Cracking-still coke subjected to such additional treatment should find an enlarged market as a "smokeless" fuel for domestic heating and an increased application in certain industrial processes.

Petroleum coke is formed as the solid residue of the destructive distillation of petroleum products are heated above their decomposition temperatures. In appearance petroleum coke is somewhat similar to that made from coal and ranges in color from dark gray to black. The coking-still type, when properly coked, is a dry, grayish material with a very dark silver-gray sheen, while the cracking-still type frequently has an oily appearance.

Still Coke

Prior to the commercial application of the modern cracking processes the source of petroleum coke was the coking still. In this type of refining equipment reduced crudes are heated, usually at atmospheric pressure, until all but approximately 8 per cent of the volatile constituents have been driven off as an overhead product and the coke is left on the bottom of the still as a solid residue. The thickness of this layer might range from 6 inches with a Mid-Continent crude to 30 inches with a Mexican crude. This type of still is operated intermittently; and when the refining of a particular batch of oil has been completed the still is permitted to cool sufficiently to allow the entry of workmen, who break up and remove the coke. Mechanical means have been devised for the removal of coke from coking stills, but in actual practice the operation is almost exclusively manual.

Modern cracking stills usually are operated above atmospheric pressure, and petroleum products are heated to convert a part of the heavier hydrocarbons of the original material into lighter hydrocarbons suitable for motor fuel. The major portion of the coke produced in such operations is deposited in the reaction chamber. As a result of increased operation of cracking stills the production of petroleum coke has increased annually. The production of petroleum coke in 1914, 213,777 tons, may be taken as the production of coking stills only. By 1919 the production had increased to 798,180 tons. During the intervening period one of the large oil companies introduced a commercial cracking process on a relatively large scale, and the increase in petroleum coke production may be attributed largely to these operations. Between 1919 and 1923 there was little change in the quantity of production. Beginning in 1924 and 1925, most of the important oil companies introduced cracking processes in their refineries and petroleum coke production increased accordingly, being in excess of 1,000,000 tons in 1927 and reaching 1,426,600 tons in 1928.

Although petroleum coke is known commonly under a variety of designations, such as "tower-still coke," "pressure-still coke," or "petroleum carbon," or may be divided further according to the particular cracking process by which it is produced, differences in chemical analyses, physical properties, and the uses determined by these characteristics tend to divide petroleum coke into two general classes, coking-still coke and cracking-still coke.

Consumption Outlets

The consumption of petroleum coke is determined by the type and degree of preparation of the material, the demand for various finished carbon products, developments in foreign countries, and prices of competitive fuels. The demand for coking-still coke is largely a matter of meeting the needs of domestic and foreign manufacturers of electrodes, dry-cell batteries, and other carbon products, while the demand for cracking-still coke depends largely upon the prices of competitive solid and liquid fuels. The largest single item of consumption results from the fuel needs of the petroleum refineries, as the relative prices of petroleum-coke screenings and fuel oil have caused refiners to burn their own coke screenings. Some quantities of the fine sizes are also sold to cement and brick plants, packing plants, and steel companies for use as a pulverized fuel.

MAJOR COMPANIES' SALES IN CALIFORNIA DECREASE

Despite a gain of 7,690,452 gallons in the consumption of gasoline in California for the first three months of this year compared with last year, seven of the nine largest marketing companies showed substantial decreases in sales. An outstanding exception was the Wilshire Oil Co. whose sales increased from 6,577,000 gallons the first quarter of 1929 to 13,756,000 gallons this year. The other company to show a gain, in the list of major marketers, was the General Petroleum Corp. which showed an increase amounting to 20 per cent.

Total sales for the nine largest companies amounted to 232,895,000 gallons a year ago and decreased to 229,866,000 gallons this year. This indicates an increase in the sales of the smaller marketers from 54,87,000 gallons a year ago to 65,595,000 gallons this year.

The following table shows the respective sales in gallons during the first quarter of this year and the same period a year ago:

Company—	1930	1929
Standard Oil Co.	51,080,000	57,902,000
Shell Oil Co.	44,700,000	45,457,000
Richfield Oil Co.	35,580,000	36,191,000
Union Oil Co.	27,159,000	29,172,000
Associated Oil Co. ..	20,931,000	22,585,000
General Pet. Corp. ..	19,736,000	15,437,000
Wilshire Oil Co.	13,756,000	6,577,000
The Texas Company.	11,994,000	15,512,000
Rio Grande Oil Co. ..	5,830,000	3,762,000

Detailed Operations in All Fields for Month of April

SUMMARY OF ALL FIELDS

Wells Completed

	Comp.	Prod.	Dry	Gas
Eastern	421	2,390	50	63
Central Ohio	96	1,663	26	41
Lima	12	68	1	1
Indiana	11	252	5	1
Michigan	35	2,164	16	2
Kentucky	127	2,341	32	6
Illinois	18	111	11	1
Kansas	85	15,609	33	4
Oklahoma	360	556,508	106	35
North Central Texas	291	33,894	156	9
East Central Texas	19	25,000	6	0
East Texas	4	0	0	4
West Texas	63	18,035	23	2
Panhandle Texas	38	15,014	6	9
Gulf Coast	130	39,812	50	2
Southwest Texas	76	78,452	28	4
North Louisiana	72	4,771	25	20
Arkansas	16	1,085	9	1
Mississippi	1	0	0	1
Montana	7	590	1	1
Wyoming	8	325	2	1
Colorado	7	145	4	0
New Mexico	10	211	5	4
Total April	1903	795,560	595	211
Total March	1746	536,163	556	180
Difference	157	262,397	40	31

Rigs and Wells Drilling

	Rigs	Drlg.	Total
Eastern	112	362	474
Central Ohio	95	190	285
Lima	2	27	29
Indiana	3	50	53
Michigan	54	109	163
Kentucky	14	140	154
Illinois	1	34	35
Kansas	38	268	306
Oklahoma	137	777	914
North Central Texas	69	339	408
East Central Texas	6	55	61
East Texas	3	12	15
West Texas	61	233	294
Panhandle Texas	42	145	187
Gulf Coast	23	204	227
Southwest Texas	64	114	178
North Louisiana	88	137	225
Arkansas	17	34	51
Mississippi	3	16	19
Alabama	2	3	5
Montana	20	82	102
Wyoming	25	118	143
Colorado	16	78	94
New Mexico	36	63	99
Utah	3	32	35
Total April	934	3,622	4,556
Total March	856	3,511	4,367
Difference	78	111	189

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	6	495	3	0
Creek	27	1,790	7	1
Hughes	5	172	1	3
Marshall	12	685	4	0
Muskogee	20	538	11	4
Oklahoma	55	494,181	0	3
Okfuskee	14	691	5	2
Okmulgee	12	166	1	2
Osage	24	2,309	8	1
Pawnee	17	522	9	0
Payne	6	2,430	2	0
Pontotoc	8	425	3	0
Pottawatomie	17	2,978	2	0
Seminole	71	44,920	14	8
Stephens	17	1,256	6	2
Wagoner	10	0	8	2
Miscellaneous	39	2,950	22	7
Total Apr.	360	556,508	106	35
Total Mar.	285	372,423	89	32
Difference	75	184,085	17	3

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Caddo	0	15	15
Carter	1	13	14
Cotton	3	15	18
Creek	13	33	46
Grady	2	4	6
Grant	0	7	7
Hughes	3	7	10
Kay	0	7	7
Lincoln	10	12	22
Marshall	2	9	11
Muskogee	9	29	38
Oklahoma	30	212	242
Okfuskee	4	24	28
Okmulgee	5	19	24
Osage	8	26	34
Pawnee	3	12	15
Payne	1	16	17
Pontotoc	3	24	27
Pottawatomie	14	35	49
Seminole	12	139	151
Stephens	3	24	27
Tulsa	0	13	13
Wagoner	0	8	8
Miscellaneous	11	74	85
Total Apr.	137	777	914
Total Mar.	115	770	885
Difference	22	7	29

WELLS COMPLETED

CARTER COUNTY

23-1s-3w Lewis, Magnolia Pet. Co. 7.... 189
24-1s-3w Spigner, Magnolia Pet. Co. 1. 108
24-1s-3w Spigner, Wirt Franklin Pet. Corp. 1 198
30-1s-3w Tom Cobb, Carter Oil Co. 1.. dry
Kola Anna, Carter Oil Co. 1.. dry
36-3s-4w Briggs, Roy M. Johnson 1.... dry

Wells completed 6
Production 495
Dry 3

CREEK COUNTY

10-17- 9 Bruce, Prairie O. & G. Co. 1.. 24
21-17- 9 Harjoche, Texas Pacific Coal & Oil Co. 9 30
17-17-12 Kiefer, Franchot Oil Co. 33.. 5
10-15- 8 Lewis, Shaffer O. & R. Co. and Billingsslea 4 205
26-19- 8 Hinton, Foster Pet. Co. et al 1 dry
30-19-10 Brightman, Holmes & Burton 1 150
11-17-10 Smith, O. M. Ire.an et al 2.... 12
34-16-10 Page, F. B. Murta et al 1-A.. dry
17-19- 9 Tucker, Sample & Mann 1.... dry
8-17-10 Pemberton, Comail Oil Co. 6.. 4
27-17-13 Bruner, J. E. Martin et al 1 .. 12
36-15- 7 Bigpond, Empire O. & R. Co. 4 30
20-19- 9 Koch, Phillips Pet. Co. and Gled Oil Co. 5 270
28-18- 9 McIntosh, Jackson & Wise 1. 4
5-18-11 Eufaula, Jackson & Wise 4.. 10
10-17- 9 Bosen, The Prairie O. & G. Co. et al 1..... 32
31-18-11 Goat, H. H. Taylor et al 2.... 10
6-17- 9 Hope, Pioneer Pet. Co. 1.... dry
28-16- 9 Scott, Franchot Oil Co. 7.... dry
10-15- 8 Lewis, Shaffer O. & R. Co. and Billingslea 3 ..... gas
30-15- 9 Coneissenney, C. G. Tibbens 8. 45
25-15-11 Reading, Sheridan Oil Co. 1-A dry
27-18- 8 Brown, J. W. Merritt et al 3 .. 12
20-18- 9 Grayson, Jackson & Wise Oil Co. 1 865
14-17- 8 Johnson, Pawnee Oil Producing Co. 5 20
22-17- 9 Grayson, H. L. Skelly and C. O. Buckles 1 ..... dry
20-17-10 Brown, Emerson et al 2..... 50

Wells completed 27
Production 1790
Dry 7
Gas 1
Gas production 34,000,000

HUGHES COUNTY

12-9- 8 Brown, Magnolia Pet. Co. 1.... dry
28-9-10 Canard, Iglehart et al 1 ..... gas
18-9- 9 Brown, Independent O. & G. Co. 1 ..... gas
17-8-10 Cornelius, Dixie Oil Co. 4..... 172
12-7- 8 Coker, Independent O. & G. Co. 1 ..... gas

Wells completed 5
Production 172
Dry 1
Gas 3
Gas production 24,500,000

MARSHALL COUNTY

14-5s-5 Talifero, Bilbo Oil Trust Co. 8.. dry
24-5s-5 Null, Bilbo Oil Trust Co. 3.... 50
R. H. Null, F. W. Merrick 14.. 100
R. H. Null, Flemming Kimbrell 3 65
Null, F. W. Merrick 13 60
19-6s-6 Reeves & Gray, Golden Rule Oil Co. 1 ..... dry
11-5s-5 Adams, Horseman & Dennis 1.. dry
14-5s-5 Talifero, Goddard Oil Co. 1.... dry
30-5s-6 West Rutherford Trust Co., Magnolia Pet. Co. 1 15
14-5s-5 Talifero, Bilbo Oil Trust Co. 9.. 55
24-5s-5 R. H. Null, F. W. Merrick 16.. 40
Null, F. W. Merrick 15 300

Wells completed 12
Production 685
Dry 4

MUSKOGEE COUNTY

26-15-16 Robins, E. B. Grubbs et al 1.. dry
5-14-19 Crittenden, R. H. Kimsey 1-A. dry
31-12-19 Phillips, Mid-Western O. & G. Co. 1 ..... gas
9-15-15 Lowery, C. O. Buckles 2..... 10
27-15-18 Townsite, W. H. Hooker 1.... dry
20-15-19 Robinson, C. D. Bradley 1 .... dry
28-16-15 M. Wheat, John Aggas 3 .... dry
19-16-16 Rolland, Bryan Pet. Co. 2.... dry
9-15-18 Mackey, D. L. T. Co. et al 2.. 280
9-15-18 Mackey, J. L. Foltz 1 220
8-13-16 Lewis, Robinson Bros. 5 20
15-13-18 Fee, L. R. Kershaw 4 ..... dry
J. Freeman, E. Mills et al 3 .. dry
23-13-18 Lowther, H. D. Johnston et al 2 ..... gas
25-16-15 Barnett, Machine Drlg. Co. 1.. dry
15-15-18 Rose, Hale & Reynolds 1 .... gas
15-13-18 Foreman, C. F. Ray et al 2.... gas
9-15-18 Carlina, H. L. Jolly 4 8
Carlina, H. L. Jolly 5 ..... dry
Rentie, H. L. Jolly 1 ..... dry

Wells completed 20
Production 538
Dry 11
Gas 4
Gas production 5,100,000

OKLAHOMA COUNTY

1-11-3w Jones Community I.T.I.O. 1 9,888
2-11-3w Theimer, Wirt Franklin Pet. Corp. 1 15,792
11-11-3w Butterfield, I.T.I.O. 1 6,528
12-11-3w Theimer, I.T.I.O. 1 22,200
Lowery, Wirt Franklin Pet. Corp. 6 12,675
13-11-3w Trosper, I.T.I.O. 9 4,663
Thomas-Fuzzell, I.T.I.O. et al 3..... 31,000
14-11-3w Pasadena Heights, I.T.I.O. 1 11,960
24-11-3w Olds, Coline Oil Co. 5..... 3,038
Fortson, I.T.I.O. 2 6,728
Fortson-Farley, I.T.I.O. 3.... 35,546
18-11-2w Warren, Coline Oil Co. 4.. 23,244
30-11-2w S. Bodine, I.T.I.O. 3 1,656
31-11-2w Jones, I.T.I.O. 4 3,908
Vinci, Sinclair O. & G. Co. 1 14,005
Vinci, Sinclair O. & G. Co. 2 3,860
12-11-3w Trosper Park, Cromwell-Franklin Oil Co. 10 18,186
24-11-3w A. Bodine, I.T.I.O. et al 7.. 1,378
25-11-3w Glauer, Coline Oil Co. 2 5,130
36-11-3w School Land No. 54, Sinclair O. & G. Co. 3 10,470
30-11-2w Emmerson, I.T.I.O. et al 3 4,408
31-11-2w Hoopes, Tom Slick Oil Co. et al 2 13,000
11-11-3w Eacock, Wirt Franklin Pet. Corp. 1 13,675
13-11-3w Trosper Park, Cromwell-Franklin Oil Co. 7 ..... gas
C. Brokaw, I.T.I.O. 1 27,504
C. Brokaw, I.T.I.O. 2 13,506
Trosper, I.T.I.O. 5 140
19-11-2w Canfield, I.T.I.O. 2 9,398
24-11-3w A. Bodine, I.T.I.O. 6 9,426
25-11-3w Johnson, I.T.I.O. 3 9,426
30-11-2w Kinter, Sinclair O. & G. Co. and Amerada Pet. 5 255
Kinter, Sinclair O. & G. and Amerada Pet. 7 710
Kinter, Sinclair O. & G. and Amerada Pet. 8 245
25-11-3w Peterson, I.T.I.O. 1 5,293
36-11-3w School Land No. 54, Sinclair O. & G. Co. 2 7,180
12-11-3w Trosper Park, Cromwell-Franklin Oil Co. 13..... 11,496
Trosper, I. T. I. Oil Co. 1.. 9,923
13-11-3w A. Brokaw, I. T. I. Oil Co. 1 1,461
23-11-3w Unsell-Krager, I. T. I. Oil Co. 3 9,609
Mollman, Mid-Kansas O. & G. Co. 2..... 4,984
24-11-3w Olds, Coline Oil Co. 9..... 1,568
7-11-2w George, I. T. I. Oil Co. 1.... gas
18-11-2w Pearl Trosper, I. T. I. Oil Co. 1 65
19-11-2w Canfield-Button, I. T. I. Oil Co. 2 18,898
1-11-3w Cunningham, Heenan & Co. 1 19,497
11-11-3w Butterfield, I. T. I. Oil Co. 1 8,400
23-11-3w Mary Unsell, I.T.I. Oil Co. 1 6,198
24-11-3w Olds, Coline Oil Co. 1..... 4,998
Trosper, I.T.I. Oil Co. 1.... 102
25-11-3w Emmerson-Joyce, I. T. I. Oil Co. 3 ..... gas
36-11-3w School land No. 67, Sinclair O. & G. Co. 1..... 9,572
19-11-2w Fuzzell, I.T.I. Oil Co. 2.... 7,902
31-11-2w Sudik, I.T.I. Oil Co. 2..... 23,878
Hoopes, Skelly Oil Co. 3.... 13,194
Hoopes, Thomas B. Slick Oil Co. 4 6,396

Wells completed 65
Production* 494,181
Gas 3
Gas production 205,000,000

*Note: Some of above wells are estimated twenty-four hours on basis of twelve-hour gauge.

OKFUSKEE COUNTY

19-12-12 Sarcy, W. C. Newman Oil Corp. 1 25
24-11-10 Turner, Fern O. & G. Co. 2.... dry
23-11-11 Pigeon, Summitt Drlg. Co. 1-A dry
26-11-11 Wilson, Moffett et al 1-A..... 10
35-11-11 Jackson, Atlantic O. P. Co. 1.. gas
1-10-11 Carson, T. P. McAdams et al 1 dry
29-12-10 Monarye, Producers & Refiners Corp. 6 40
22-12-11 Wilson, Sunray Oil Co. and Sheldon 1 450
3-10-11 Johnson, Hazlett et al 2..... dry
32-12-10 Foster, McMahon & Carey 2.... gas
12-10-11 Robinson, F. D. Misener 3..... 5
16-10-11 Fier, Jarvis & Holm 2..... dry
21-12-11 Hopping, Shell Pet. Corp. et al 1..... 155
35-11- 9 Severs "A." E. L. Robinson et al 5 6

Wells completed 14
Production 691
Dry 5
Gas 2
Gas production 23,500,000

OKMULGEE COUNTY

24-15-11 Bruner, Sheridan Oil Co. 1.... 10
32-15-13 Clarkson, D. M. Logan 1..... gas
14-14-14 V. Colbert, J. E. Wallace 12.... 25
35-14-14 Anderson, C. D. Burns 16..... 30
17-12-13 Burgess, W. B. Pine 1..... 58
31-16-12 Powell, Miller et al 1-A..... dry
21-12-14 Smith, Prince et al 4..... gas
14-14-14 V. Colbert, Mechlin & Berlin 9 10
20-12-13 Burgess, Morrison et al 3..... 8
14-14-14 V. Colbert, J. E. Wallace 13.... 12
19-14-14 G. Bradford, W. B. Pine 5.... 8
35-14-14 A. Anderson, J. L. Selby 33.... 15

Wells completed 12
Production 166
Dry 1
Gas 2
Gas production 5,330,000

OSAGE COUNTY

20-29- 9 Winona Oil Co. 11..... 35
32-24- 9 Peters Pet. Co. 7..... 20
32-23-10 Union Oil & Mining Co. 3..... 25
5-21- 9 Peter Adamson Jr. 1..... 15
29-29- 6 Duffield & Howard et al 1.... dry
22-27-11 Peters Pet. Corp. 10..... 40
11-21- 8 A. G. Oliphant et al 1..... 389
12-21-11 Zika & Neeley 2..... 35
15-26- 6 Vacuum Oil Co. et al 5..... 120
15-26- 8 L. G. Stanley et al 1..... dry
22-25- 9 Peters Pet. Corp. et al 1..... dry
34-24- 8 Wm. D. Gray et al 5.....1000
20-29- 9 Winona Oil Co. 12..... 40
11-26- 6 Vacuum Oil Co. 7..... 410
33-26- 6 Kewanee O. & G. Co. 1..... 120
10-26- 8 Peters Pet. Corp. and Producers & Refiners Corp. 3.. 25
17-25- 8 Cities Service Gas Co. 93..... dry
8-24- 9 I. T. I. Oil Co. 425..... gas
26-24-11 Harland Oil Co. 75..... dry
28-23- 9 I. T. I. Oil Co. 4..... dry
36-22- 8 L. G. Stanley et al 1..... dry
16-21- 9 Clint Moore Estate et al 3.... dry
22-24- 7 Continental Oil Co. and Gypsy Oil 2 35
5-21- 9 Peter Adamson Jr. 2..... dry

Wells completed 24
Production 2309
Dry 8
Gas 1
Gas production 4,000,000

PAWNEE COUNTY

6-20- 8 Little, Foster Pet. Co. 9..... 90
29-20- 9 Russell, Hoss et al 1..... dry
30-21- 9 Edmiston, John Byrne 4..... 25
Edmiston, Geraldine Oil Co. 4 20
23-21- 7 Hull, John Markham Jr. 7.... dry
32-21- 7 Niccum, Turner et al 1..... dry
31-21- 8 Koup, P. J. Breslin et al 1.... dry
30-21- 9 Edmiston, John Byrne 5..... 10
Byers, John Byrne 2-A..... dry
19-20- 7 Van Hoy, Frank Murta et al 1 dry
6-20- 8 Cotton, Martin et al 3..... 2
6-20- 8 Cotton, Martin et al 4..... 165
19-20- 9 Greenwood, Operators Oil Co. 1 dry
20-20- 9 Clifford, McMan Oil Co. 1.... dry
26-20- 9 Copeland, Hay et al 5..... 200
29-29- 9 Smelzer, Cimarron Oil Co. 2.... 10
20-20- 9 Coats, C. C. Chamberlain 3.... dry

Wells completed 17
Production 522
Dry 9

PAYNE COUNTY

1-18- 5 Benson, Home Gas Co. 3..... dry
5-17- 4 Sharrum, Mulberry Oil Co. 6..1092
24-18- 4 Shannon, Transcontinental Oil Co. 1 ..... dry
32-18- 4 Ballard, Mulberry Oil Co. 4.... 332
Ballard, Mulberry Oil Co. 3.... 196
4-18- 5 Echo Hawk heirs, Deep Rock Oil Corp. 2..... 810

Wells completed 6
Production 2430
Dry 2

PONTOTOC COUNTY

31- 5- 5 Bullard, Benedum & Trees Oil Co. 2 70
32- 5- 5 Haynes, Dixie Oil Co. 2..... 120
28- 5- 8 Ralls, Tidal Oil Co. 1..... dry
2- 5- 5 Romney, Benedum-Trees Oil Co. 1 ..... dry
28- 5- 8 Snow, The Prairie O. & G. Co. 1 20
30- 5- 5 Malloy, B. A. La Salle 1..... 100
34- 5- 5 Brydria, Benedum & Trees Oil Co. 1 ..... dry
31- 5- 5 Browall, Benedum Trees Oil Co. 2 115

Wells completed 8
Production 425
Dry 3

POTTAWATOMIE COUNTY

8- 9- 5 Earlsboro townsite, Barrett & Brown et al 1..... 975
2- 7- 4 Weldfelt, Independent O. & G. & Mid-Kansas Oil 4..... 272
12- 7- 4 W. Jordan, Magnolia Pet Co. 1 107
7- 7- 5 Brandenburg, Sinclair O. & G. Co. 4 135
28- 7- 4 Deatherage, Prairie O. & G. 1. 116
... 5- ... ownsite, Commerce Dev. Co. 1 325
17- 9- 5 Shimer, Sinclair O. & G. Co. et al 1..... dry
6- 8- 5 Peck, Magnolia Pet. Co. 1..... 30
3- 7- 4 Asher, Independent O. & G. Co. & Mid-Kansas Oil Co. 1..... dry
4- 7- 4 McGee, Atlantic O. P. Co. 1.... 250
Morgan, Sinclair O. & G. Co. 1 375
Morgan, Sinclair O. & G. Co. 2 35
Norma, Twin State Oil Co. 1.. 115
21- 7- 4 Walker, Magnolia Pet. Co. 1... 14
30- 7- 4 Lynn, The Texas Company 1.. 75
4- 7- 4 McGee, The Prairie Oil & Gas Co. 2 120
12- 7- 4 Walter, The Prairie Oil & Gas Co. & Slick 1..... 40

Wells completed 17
Production 2978
Dry 2

SEMINOLE COUNTY

19- 9- 6 Fullerton, Amerada Pet. & Dixie Oil 3..... 2695
26- 9- 6 Strothers "A," Pure Oil Co. 11 475
31- 9- 6 Tulsey, Lippa Drlg. Co. 1..... dry
24- 8- 6 Willie, Gypsy Oil Co. 3..... 1655
24- 7- 6 Billington, Amerada Pet Corp. 1 gas
Willie, Gypsy Oil Co. 4..... 1705
8- 6- 6 Harjoche, Mid-Continent Pet. Corp. 1 ..... dry
Harjoche, Mid-Continent Pet. Corp. 2 ..... dry
Harjoche, Mid-Continent Pet. Corp. 3 ..... dry
Harjo, Twin State Oil Co. 1... dry
9- 6- 6 Sachemeche, Empire O. & R. 3 688
16- 6- 6 Okfuskee, Independent O. & G. Co. 1 97
Robert, McCulloch Oil Co. 1.... 770
17- 6- 6 Johnson, Sinclair O. & G. Co. 1 770
Atkinson, The Texas Co. 1....1900
20- 6- 6 Hyde, Hilton, Phillips et al 1..1685
7- 6- 8 Spillman, Carter Oil Co. 4.....1610
7- 6- 8 I. Davis "B," Sinclair O. & G. Co. 1 ..... dry
7- 5- 8 Harjo, The Prairie O. & G. Co. 1 ..... gas
19- 9- 6 Taylor, Gypsy Oil Co. 1.....1385
Taylor, Gypsy Oil Co. 2.....2202

Fullerton, Amerada Pet. Corp. & Dixie Oil 4 845
11- 7- 6 Jackson, Carter Oil Co. 8 ..... dry
23- 7- 6 Aleck, Mid-Continent Pet Corp. 3 30
5- 7- 7 Walker, Gypsy Oil Co. 5 1430
Walker, Gypsy Oil Co. 6 1440
Phillips, Sinclair O. & G. Co. 7 675
Phillips, Sinclair O. & G. Co. 10 360
9- 6- 6 Sachemeche, Champlin O. & R. Co. & Shell Pet. 4 91
Sachemeche, Champlin O. & R. Co. & Shell Pet. 5 300
16- 6- 6 Roberts, Harris et al 1 372
12- 5- 7 Cheparney, W. B. Pine 1 ..... gas
12- 6- 7 Diament, Prairie O. & G. 2 1515
5- 7- 7 Smith, The Prairie O. & G. Co. 6 400
30- 6- 6 Factor, Producers & Refiners Corp. 1 ..... dry
8- 7- 7 Tiger, The Prairie O. & G. Co. and T. B. Slick 3 ..... gas
27- 8- 6 C. Nelly, Carter Oil Co. et al 1 dry
13- 7- 6 Coker, Empire O. & R. Co. 5 .. 500
9- 6- 6 Wisey, Magnolia Pet. Co. 1 .. dry
18- 6- 6 Smith, Gypsy Oil Co. 2 860
5- 7- 7 Smith, The Prairie O. & G. Co. 4 ..... gas
Smith, The Prairie O. & G. Co. 5 240
8- 7- 7 Harjo, The Prairie O. & G. Co. and Slick 1 130
9- 6- 6 Nora, The Prairie O. & G. Co. and Slick 1 ..... dry
Tiger, The Prairie O. & G. Co. and Slick 2 497
18- 9- 6 Noble, Barnsdall Oil Co. 3 125
19- 9- 6 Taylor, Gypsy Oil Co. 3 3800
Taylor, Gypsy Oil Co. 4 4095
Lasley, Tidal Oil Co. and Interocean Oil 2 1750
20- 9- 6 Harjo, Tidal Oil Co. et al 2 ... 400
18- 9- 7 Harjo, Gypsy Oil Co. 3 195
30- 8- 7 Harjo, Independent O. & G. Co. et al 1 ..... dry
9- 6- 6 Sachemeche, Empire O. & R. Co. 4 506
16- 6- 6 Okfuskee, Independent O. & G. Co. 2 902
17- 6- 6 Johnson, Sinclair O. & G. Co. 2 45
Wren, Gypsy Oil Co. 2 342
13- 6- 7 School Land, Garland et al 1 .. 1925
24- 9- 5 Baker, Prairie O. & G. Co. 8 .. 110
17- 6- 6 Griffin, The Prairie O. & G. Co. 4 470
13- 7- 6 Davis, Producers & Refiners Corp. 2 565
8- 7- 7 K. Harjo, The Prairie O. & G. Co. and Slick 2 ..... gas
24- 9- 5 Maguire, Continental Oil Co. 2. 1480
20- 9- 6 Jones, McMan Oil Co. 2 336
9- 8- 7 Anderson, J. A. Hull 1 ..... dry
16- 8- 7 Miller, Magnolia Pet. Co. 1 ... dry
7- 6- 6 Maupin, Pure Oil Co. 1 ..... gas
17- 6- 6 Griffin, Dixie Oil Co. 1 167
19- 6- 6 Morgan, Superior Oil Corp. 1 .. 35
7- 6- 8 Spillman, Carter Oil Co. 3 5
12- 5- 7 Lusty, Blackwell O. & G. Co. and Sunray Oil Co. 2 ..... gas
13- 7- 6 Kouri, The Prairie O. & G. Co. and Slick 2 345

Wells completed 71
Production 44,920
Dry 14
Gas 8
Gas production 258,199,440

STEPHENS COUNTY

25-6 -18w Reneau, I. D. Flanary 1 ..... dry
34-1s- 8w Kagay, Magnolia Pet. Co. 27. 66
Burks, Ven Mex Oil & Mid-Continent Oil 5. 100
10-2s 6w Randle, Dunmar Oil Co. 2 ... gas
20-2s- 7w Wilson, George Pace et al 1 .. 25
19-1s- 8w Worrell, Magnolia Pet. Co. 6 gas
34-1s- 8w Nigh, American Pipe Line Co. 10 ..... dry
35-1s- 8w Poole, Heydrick et al 4 70
30-2 - 8w Johnson, Smythe & Nash 1 .. 15
8-2s- 6w Brookes, Wirt Franklin Pet. Corp. 2 ..... dry
16-2s- 6w Brittian, Atlantic O. P. Co. 1 400
34-1s- 8w Burke, Magnolia Pet Co. 11 .. dry
15-2s- 6w Christy, Magnolia Pet. Co. 1 .. 220
12-1s- 4w Hanson, Magnolia Pet. Co. 4 .. 56
23-2s- 8w Feather, Pace et al 1 ..... dry
9-2s- 6w Martin, Wirt Franklin Pet. Corp. 1 ..... dry
Martin, Wirt Franklin Pet. Corp. 2 300

Wells completed 17
Production 1252
Dry 6
Gas 2
Gas production 56,000,000

WAGONER COUNTYY

23-18-17 C. Walker, Tulsa Drilling Co. 1 gas
30-18-18 M. Tucker, Chas. Harris 3 .... dry
36-16-17 Brown, Hale Ford Oil Co. 5 .. dry
14-17-16 Atkins, W. A. Dodd 7 ..... dry
27-18-17 Murrell, I. V. Horner 1 ..... gas
10-18-16 Sier, Hunter et al 2 ..... dry
26-18-17 Young, J. L. Dixon 2 ..... dry
33-18-18 Jones, Utopia Oil Co. 1-A .... dry
Jones, Utopia Oil Co. 2-A .... dry
22-16-19 Crow, C. F. Finefield 1 ..... dry

Wells completed 10
Dry 8
Gas 2
Gas production 931,000

MISCELLANEOUS COUNTIES WELLS COMPLETED

Beckham County—
32-8-24w Martin, Martin & Kay 1 .... dry
Caddo County—
36-6-10w Niles, Magnolia Pet Co. 3.... dry
E. M. Rowe, Magnolia Pet. Co. 3 ..... dry
Comanche County—
33-1-9w Howe, Pelwin Oil Co. 1 ..... dry
Cotton County—
8-2s- 9w John, Thomas Medlin 1 ..... dry
1-2s-10w Patterson, Shasta Oil Co. 4.. 60
Chambers, Harris & McNeal 2 60
Patterson, Shasta Oil Co. 2.. 100
2-2s-10w Burneaugh, Shasta Oil Co. 4.. 100
Garfield County—
9-20-4w Looman, Continental Oil Co. 1 dry
12-20-4w Miller, Continental Oil Co. 1.. dry
Grant County—
27-28-7w Bilderback, Gypsy Oil Co. 1.. dry
35-28-3w Secatt, Tidal Oil Co. 1 ..... gas
Garvin County—
11-4-1 Mullins, W. H. Peckham et al 1 dry
10-1-3w F. Rose, Magnolia Pet Co. 1.. dry
Jefferson County—
25-6s-6w Spring, Bridwell Oil Co. 1-C.. 10
34-6s-5w Seay, Carter Oil Co. 3 110
33-7s-6w Stanfield, O. R. Hart et al 1. dry
34-6s-5w Seay, O. V. Beck 8 60
Seay, O. V. Beck 7 290
Kay County—
29-29-1 Brooks, Chas. Lancer 1 ..... gas
Kiowa County—
18-6-16w Ditmar, Mesa Oil Co. 3 7
Fuqua, Parker et al 4 12
4-6-16w Fox, Eugene Burke 1 ..... dry
Lincoln County—
25-17-3 Furst, Shell Pet. Corp. 1 .... gas
17-14-4 Myers, Magnolia Pet. Co. 1.... 1800
Logan County—
21-18-4w Kendrick, The Prairie O. & G. Co. 1 215
31-19-4w Williams, Wentz Oil Corp 4.. 62
McIntosh County—
31-10-14 Self, Jennings Bros. 1 ..... dry
36-12-18 Frazier, Midwestern O. & G. Co. 1 ..... gas
L. Frazier, Midwestern O. & G. Co. 1 ..... dry
McClain County—
16-5-3 Newsom, Homaokla Oil Co. 1.. dry
Noble County—
21-24-1w Smizer, Mid-Co. Oil Co. 1 .... dry
Sequoyah County—
33-11-25 Barnes, Western Oklahoma Gas Co. 1 ..... gas
Tillman County—
11-4s-16w Rutherford, Bridewell Oil Co. 1 ..... dry
Tulsa County—
20-19-14 Bruner, Murray et al 1 ..... gas
35-19-14 Marshall, R. E. Downing 1.... dry
28-21-14 Smith, J. E. Moore 4 ..... dry
21-21-14 Glass, C. R. Colpitt 1 ..... dry
Washington County—
25-25-12 James, John Landers 5 15
18-25-13 Getty, Dewey Portland Cement Co. 1 ..... dry
26-25-12 G. A. Hall et al 3 ..... dry
19-28-13 Wilson, D. M. Tyler 1 25
Nowata County—
16-29-17 Ferguson, Mitchell & Weible 8 3
21-27-16 Smith, Aymes & Smith 3 20
Craig County—
1-25-19 Deerinwater, Jane Oil Co. 12.. 1
15-27-19 Still, Dewey Portland Cement Co. 1 ..... gas

Wells completed 39
Production 2950
Dry 22
Gas 7
Gas production 13,905,000

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	11	490	4	0
Greenwood	14	2,272	3	0
McPherson	19	8,049	1	1
Sedgwick	12	2,333	5	1
Miscellaneous	29	2,465	20	2
Total Apr.	85	15,609	33	4
Total Mar.	93	17,500	41	8
Difference	8	1,891	11	4

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	4	19	23
Cowley	2	13	15
Elk	0	6	6
Ellis	1	10	11
Greenwood	4	30	34
Harvey	0	4	4
McPherson	8	67	75
Marion	0	6	6
Reno	0	6	6
Rice	2	6	8
Russell	4	8	12
Sedgwick	1	7	8
Stevens	1	12	13
Sumner	1	11	12
Woodson	1	4	5
Miscellaneous	9	59	68
Total Apr.	38	268	306
Total Mar.	51	250	301
Difference	13	18	5

WELLS COMPLETED BUTLER COUNTY

19-26-5 Houston, Empire O. & R. Co. 19 30
20-26-5 Koogler, Empire O. & R. Co. 95 75
22-27-5 Cranston, Empire O. & R. Co. 13 100
25-24-3 Wilkinson, Ramsey et al 1 .. dry
20-26-5 Koogler, Empire O. & R. Co. 94 60
23-27-5 Nixon, Lario O. & G. Co. 1 .... dry
22-27-5 Brandenberger "A," Empire O. & R. Co. 7 100
33-27-7 Semisch, Empire O. & R. Co. et al 1 ..... dry
24-27-3 Basinger, Aladdin Pet. Corp 2 25
10-28-6 Slabaugh, Johnson et al 1 .... dry
28-27-6 Stern, Dixie Oil Co. 3 100

Wells completed 11
Production 490
Dry 4

GREENWOOD COUNTY

29-22-13 Blanck, Gore & Phillips 2 .. 30
21-23-11 Edwards "B," Empire O. & R. Co. 6 135
22-23-11 Patterson, Simmons & Rhodes 3 532
36-23-11 Patterson "C," Empire O. & R. Co. 3 600
13-24-12 Bonnett, Marshall et al 9.... 25
Bonnett, Marshall et al 10.... 120
6-25- 9 Wilkinson, Lassen et al 7 175
15-27-13 Adams, Mid-Kansas O. & G. Co. 1 ..... dry
27-23-11 Winiger, Simmons and Amerada Pet. Corp. 1 ..... dry
6-24-12 Nesbitt, Empire O. & R. Co. 1. 275
36-24-10 Jones, Aladdin Pet. and Phillips Pet. Co. 1 30
1-24-11 S. M. Newhouse, The Prairie O. & G. Co. 3 200
N. Newhouse, The Prairie O. & G. Co. 1 150
30-24-13 Dame, Roth & Faurot 1 ..... dry

Wells completed 14
Production 2272
Dry 3

McPHERSON COUNTY

36-19-2w Koehn, Shell Pet. Corp. 1 ... 335
1-20-2w Ritz, Shell Pet. Corp. 4 ..... dry
7-21-4w Cornelson, McCulloch Oil Co. 1 dry
9-21-3w Voshell, I.T.I.O. 1 833
10-21-3w Voshell, Sinclair O. & G. Co. 4 825
20-17-3w Johnson, Dixie Oil Co. 1..... dry
26-20-2w Rudiger, McPherson O. & G. Dev. Co. 1 ..... dry
27-20-3w Stucky, Slick, Pryor & Lockhart 1 ..... gas
4-21-3w Krehbiel, Barnsdall Oil Co. 2. 1272
9-21-3w Voshell, Dixie Oil Co. and Amerada Pet. 1 ..... dry
Stucky, Shell Pet. Corp. 4.... 1380
10-21-3w Stucky, Gypsy Oil Co. 1.... dry
Voshell, Sinclair O. & G. Co. 3 490
16-21-3w Koehn, Shell Pet. Corp. 1 ... 710
10-21-3w Stucky, The Texas Company 1 dry
Stucky, The Prairie O. & G. Co. 3 ..... dry
Voshell, Sinclair O. & G. Co. 5 dry
Stucky, The Prairie O. & G. Co. and T. B. Slick 1 554
Stucky, The Prairie O. & G. Co. and T. B. Slick 2 1650

Wells completed 19
Production 8049
Dry 9
Gas 1
Gas production 5,500,000

SEDGWICK COUNTY

15-26-2 Lygrisse "D," Shell Pet. Corp. 1 300
1-26-1w Reed, Continental Oil Co. and Gypsy Oil Co. 7 682
7-26-1 Shawver, Continental Oil Co. and Gypsy Oil Co. 10 191
22-26-2 Tripp, Smith & Ash and Shell Pet. Corp. 1 55
14-27-1w Van Arsdale, C. B. Davis 1... dry
11-26-2 Stollie, Shell Pet. Corp. 1.... 355
27-34-2 Spence, Shawver and Continental Oil Co. 3 ..... gas
1-26-1w Reed, Continental Oil Co. and Gypsy Oil Co. 8 750
3-28-1w Buckles, McCulloch Oil Co. 1-A dry
15-26-2 Greenwick Townsite, G. L. Ramsey 3 ..... dry
22-26-2 Lygrisse "C," Shell Pet. Corp. 2 ..... dry
24-28-1 La Fonte et al 1 ..... dry

Wells completed 12
Production 2333
Dry 5
Gas 1
Gas production 6,500,000

WELLS COMPLETED MISCELLANEOUS COUNTIES

Barber County—
1-33-15w Lanker, Barbara Oil Co. 1.... dry
Barton County—
4-16-11w Davidson, The Prairie O. & G. Co. 1 250
Chautauqua County—
16-35-11 Anderson, Croft et al 1 ..... dry
13-34- 9 Foster, The Prairie O. & G. Co. 1 ..... dry
12-32-10 Jeannerette, Griffith & Bell 1. 85
Coffey County—
7-23-15 Levering, Shaffer & Howell 1 dry
13-23-14 Scott "B," Selby O. & G. Co. 1 dry
18-23-15 Tebbins, Ritchey & Moore 2.. dry
Cowley County—
11-31-6 Tatum, Mead et al 1 ..... dry
31-31-8 Reidy, Roth & Faurot 2 ..... dry
17-32-5 Stafford, Crow et al 1 ..... dry
Elk County—
16-29-9 Shroder, Flemming et al 1 100
Ellis County—
5-12-17w Shutts, Phillips Pet. Co. 2... 250
18-12-17w Schneider, Phillips Pet. Co. 1 75
Harvey County—
2-23-3w Reiger, Liggett et al 1 ..... dry
Lyon County—
4-21-10 Ewers, Sheedy et al 1 ..... dry
30-21-11 Hensley, Bailliere et al 1 .... dry
Marion County—
10-17-4 Rumold, Phillips Pet. Co. 1 .... dry
Montgomery County—
16-34-15 Mester, Geo. Shlmberger 66... gas
2-34-13 Stroud, J. P. Brady 3 ..... dry
Stroud, J. P. Brady 2 5
11-33-14 Bloom, Hydraulic Oil Co. 1 .. dry
Pawnee County—
11-20-18w Black, The Prairie O. & G. Co. 1 ..... dry
Reno County—
22-26-8w McPheeters, Vernon Oil Co. 1. dry
Rice County—
21-20-10w Binger, Vickers Pet. Corp. 1.1700
24-20- 6w Johnson, Derby Oil Co. 1-A. dry
Rush County—
11-18-16w Mohr, Milmac Oil Co. et al 1 gas
Sumner County—
9-34-1 Welch, Harris & Haun 1-A .... dry
Washington County—
27-4-3 Linn, McCool & Vincent 1.... dry

Wells completed 29
Production 2465
Dry 20
Gas 2
Gas production 24,500,000

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Archer	44	1,528	21	0
Baylor	4	0	4	0
Brown	25	224	16	2
Callahan	12	15	11	0
Clay	2	0	2	0
Coleman	18	82	13	1
Comanche	2	0	0	2
Cooke	10	43	6	0
Eastland	6	12	3	2
Erath	1	0	0	1
Fannin	1	0	1	0
Grayson	2	0	2	0
Jack	3	140	1	0
McCulloch	1	0	1	0
Montague	7	356	4	0
Palo Pinto	3	21	1	0
Parker	1	0	1	0
Shackelford	15	200	12	0
Stephens	4	15	2	1
Tarrant	1	0	1	0
Throckmorton	3	0	3	0
Wichita	17	702	4	0
Wilbarger	28	1,518	7	0
Young	81	29,038	40	0
Total April	291	33,894	156	9
Total March	331	14,638	179	18
Difference	40	19,256	23	9

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Archer	10	5	27	42
Brown	2	6	5	13
Callahan	3	4	8	15
Coleman	2	6	21	29
Cooke	2	3	7	12
Clay	0	0	3	3
Eastland	3	6	22	31
Erath	2	2	2	6
Jack	1	3	6	10
Montague	0	3	4	7
Palo Pinto	3	5	6	14
Shackelford	6	4	12	22
Stephens	2	4	14	20
Throckmorton	0	2	2	4
Wichita	3	7	11	21
Wilbarger	8	20	17	45
Young	20	7	51	78
Miscellaneous Counties	2	19	15	36
Total April	69	106	233	408
Total March	75	144	218	437
Difference	6	38	15	29

WELLS COMPLETED ARCHER COUNTY

Wilson-Q. L. T. Burns 1 ..... dry
Jackson, H. Hines 1 ..... dry
McClure, Douglas Oil Co. 7 47
Harmel, Golding & Cochran 4 ..... dry
Kunkel, Goldsmith & King Roy. Co. 10 65
Pace, W. B. Hamilton 1 3
Kunkel, M. & V. Oil Co. 4 20
Herron, J. J. Moran et al 1 ..... dry
Farmer et al. Paul B. Scott 1 28
Wright, The Texas Company 1 26
Kunkel, Williams & Primrose Ref. Co. 1 dry
Threet, W. C. Young 2 ..... dry
Ray, Fain-McGaha Oil Corp. 1 ..... dry
Phillips, Golding-Cochran 1 ..... dry
Young, Lawson-Duke et al 3 20
Richardson, J. H. Massie 2 24
Clark-Richardson, Prairie Oil & Gas Co. 9 ..... dry
Prideaux, Shappell Oil Co. 14 ..... dry
Prideaux, Shappell Oil Co. 15 10
Fish, Simms Oil Co. 1 ..... dry
Farmer et al, Underwood Drlg. Co. 1 dry
Ferguson-B, Bateman & Dingee 1 .. dry
Logan et al, Bridwell & Continental, 5 28
Kunkel-B, T. F. Hunter et al 3 56
Richardson, J. H. Massie 3 200
Lauster, George L. Pace et al 1 ..... dry
Young-D, Pandem Oil Corp. 10 40
Prideaux, Shappell Oil Co. 16 8
Prideaux, Shappell Oil Co. 17 ..... dry
Kunkel et al, United Producers Co. 6 dry
Wilson-A, Barnsdall Oil Co. 11 20
Fails, L. T. Burns 1 175
Fails, L. T. Burns 2 150
Kunkel, Goldsmith & King Roy. Co. 11 dry
Kunkel-A, T. F. Hunter 4 ..... dry
Richardson, Independent D. & P. Co. 1 dry
Lauster, S. Kruger et al 1 ..... dry
Kunkel, M. & V. Oil Co. 5 23
Richardson, J. H. Massie 4 216
Richardson, J. H. Massie 5 240
Richardson, J. H. Massie 6 ..... dry
Bloodworth-A, Moran Drlg. Co. et al 6 16
Prideaux-C, Panhandle Ref. Co. 19... 3
Richardson-B, Perkins & Cullum 3 110

Completions 44
Production 1,528
Dry holes 21

BAYLOR COUNTY

Young-Murrell, Looney & Hutchinson 1 dry
Fancher & Sons, Madden & Rose et al 1 dry
Portwood, Perkins & Cullum 1 ..... dry
J. J. Morris, Hines et al 1 ..... dry

Completions 4
Dry holes 4

BROWN COUNTY

McClanahan, Atlantic-Pacific Oil Corp. et al 1 ..... dry
George, E. L. Smith Oil Co. 19 20
Hall, Baker Bros. 2 ..... dry
Richardson, Bush & Roberts 1 ..... dry
Marr, Hynes et al 1 18
Williams-B, Phillips Pet. Co. 1 ..... gas
Hickman-A, Ven-Mex Oil Co. of Texas 25 5
Hickman, Young Bros., Alexander & Woodley Pet. Co. 25 160
Hall, Baker Bros. 3 ..... dry
McCulley, Greene Prod. Co. 2 5
McCulley, Greene Prod. Co. 3 ..... dry
Reeves, Arcadia Ref. Co. 1 ..... dry
Keller, Mitcham et al 2 ..... dry
Brooks, Paramount Oil Ref. Corp. et al 1 ..... dry

Truehart-A, Arcadia Ref. Co. 5 ..... dry
Strickland, F. P. Hynes 1 ..... dry
Windham, Lane et al 1 ..... dry
Buzbee, McCarter et al 1 ..... dry
Butler, Michel & Nichols 2 ..... dry
Carmichael, E. L. Smith Oil Co. 1 .. gas
George, E. L. Smith Oil Co. 18..... dry
George, E. L. Smith Oil Co. 40 10
Nichols, L. A. Austin 1 3
Dixon, Hart & Cole 2 ..... dry
Cates, Hudson et al 1 ..... dry

Completions 25
Production 224
Dry holes 16
Gas 2
Gas production 3,300,000

CALLAHAN COUNTY

Jackson, Gibson & Johnson, Inc. 3 ... dry
McDonald, Gibson & Johnson, Inc. 1 .. dry
Johnson, Mook-Texas Oil Co. 4 15
West, Prairie Oil & Gas Co. 1 ..... dry
Alvord, Shaheen et al 1 ..... dry
Cutbirth, Campbell Oil Corp. 1 ..... dry
Boatwright, H. D. Creath 1 ..... dry
Jackson-G, Humble Oil & Ref. Co. 2.. dry
Jackson, Humble O. & R., Bateman et al 2 ..... dry
Jackson, Duffield Bros. et al 1 ..... dry
Brown, B. A. Duffy 1 ..... dry
Williams, Sedgwick O. & G. Co., Oyster & Rife 1 ..... dry

Completions 12
Production 15
Dry holes 11

CLAY COUNTY

Byers & Co., J. B. Peacock et al 1 ... dry
Stine-J, Saxet Oil Co. 2-A ..... dry

COLEMAN COUNTY

Forman, Amerada Pet. Corp. 1 ..... dry
Kingsberry, Arcadia Refg. Co. 1 ..... dry
Overall, Continental, Atlantic et al 2 (no production) ..... key well
Lynch, Jamison, Pollard, Foster et al 1 dry
Bartholomew, Lloyd Oil Corp. 7 50
Reeves, Permian Oil Co. 2 ..... dry
McAdams, Potomac Pet. Co. 2 ..... dry
Stewardson, Tidal Oil Co. 4..... 17
Sealy & Smith, Whitfield et al 2 ..... dry
Barton, Greene Prod. Co. and E. L. Chapman 1 ..... dry
Hutchings, Homaokla Oil Co. 1 ..... gas
Gray, Arcadia Refining Co. 1 ..... dry
Shelton, Gwinnup et al 1 ..... dry
Switzer, Arcadia Refining Co. 2 ..... dry
Williams, Eastland Oil Co. 1 ..... dry
Weaver, Vacuum Oil Co. et al 6 ..... dry
Fletcher, Mattocks et al 1 ..... dry
Stewardson, Taylor-Link Oil Co. 3 15

Wells completed 18
Production 82
Dry 13
Gas 1
Gas production 1,000,000

COMANCHE COUNTY

Cogburn, Producers & Contractors Corp 1 ..... gas
Lloyd, Lone Star Gas Co. 1 ..... gas

Wells completed 2
Gas 2
Gas production 1,759,680

COOKE COUNTY

Wheelock, Lloyd Oil Corp. 9 2
Able, C. J. Mellen et al 1 ..... dry
Milburn, Sun Oil Co. 1 22
Cannon, A. C. Hill & Cochran 1 ..... dry
Wheelock, Lloyd Oil Corp. 10 11
Wheelock-B, Lloyd Oil Corp. 1 8
Crabtree, Lee Tidwell et al 1 ..... dry
Mount-A, Danciger Oil & Refg. Co. 1 .. dry
Willis, Lewis P. Co. et al 1 ..... dry
Mount, Sun Oil Co. 1 ..... dry

Wells completed 10
Production 43
Dry 6

EASTLAND COUNTY

Harbin, C. E. Delaney 1 ..... dry
Patterson, Hyer et al 1 ..... gas
Stracener, Phillips Pet. Co. et al 1 .... dry
Coon, Hoffman & Page Co. 3 12
Bivins, McLester et al 1 ..... gas
Westlenholm, Texas Development Co. 2 dry

Wells completed 6
Production 12
Dry 3
Gas 2
Gas production 7,478,000

ERATH COUNTY

Alexander, Associated Prod. Co. 1 ..... gas

FANNIN COUNTY

Darling, Erin Production Co. 1 ..... dry

GRAYSON COUNTY

Henderson, F. H. E. Oil Co. 1 ..... dry
Bishop, Groves & Ruwaldt. 1 ..... dry

JACK COUNTY

Raley, C. W. Boller 4 40
Eaton & Daniels, Panhandle Refg. Co. 4 100
Loving, T. G. Shaw 1-A ..... dry

Wells completed 3
Production 140
Dry 1

McCULLOCH COUNTY

Bennett, Smith et al 1 ..... dry

MONTAGUE COUNTY

Dennis, Bridwell Oil Co. 2 ..... dry
Lemon, W. H. Godfrey et al 1 26
Salmon-E, Arco Oil Co. 1 310
Edmondson, Bridwell Oil Co. 1 ..... dry
Cunningham et al, Barnsdall Oil Co. 5.. 20
Howard, O. V. Beck 1 ..... dry
Brown, Bridwell and Continental 2 .. dry

Wells completed 7
Production 356
Dry 4

SHACKELFORD COUNTY

Bowman, Campbell Oil Co. 1 ..... dry
Walker, Douglas & Earl 1 ..... dry
Simpson, Gibson & Johnson Oil Co. 2 .. dry
Reynolds-C, Albany Oil Co. 1 ..... dry
Nail, Callahan & Carter 1..... dry
Walker, L. D. Hill 2 ..... dry
Scott Ranch, Roeser & Pendleton 1 40
Morris & Buey-A, Sedwick & Webb 1.. dry
Brewster, E. J. Stump 1 150
Grimes, Union Oil Co. of Nevada 1 .... dry
Davis-B, Grisham & Hunter 1 10
Ackers-B, Humble O. & R. Co. 1 ..... dry
Davis, Morton et al 1 ..... dry
Bowman, Deener O. P. Co. 1-A ..... dry
Parrish, Phillips Pet. Co. 11 ..... dry

Wells completed 15
Production 200
Dry 12

STEPHENS COUNTY

Smith, Loftin & Jordon 1 ..... gas
Sikes, Phillips Pet. Co. 2 ..... dry
Binney, T. P. Coal & Oil Co. 77 ..... dry
Riddle, Brown Oil Co. 6 15

Wells completed 4
Production 15
Dry 2
Gas 1
Gas production 3,250,000

PALO PINTO COUNTY

R. S. Dalton, R. S. Dalton 1 ..... dry
Pennington, W. H. Pennington 1 8
Dalton, J. Dalton Oil Co. 8..... 13

Wells completed 3
Production 21
Dry 1

PARKER COUNTY

Womack, Bratcher et al 1 ..... dry

TARRANT COUNTY

Maloney, Texwa Oil Co. 1 ..... dry

THROCKMORTON COUNTY

Keichan, L. V. Ulrey 1 ..... dry
Crowsin, Martin et al 1 ..... dry
Brown Estate, Eumo Oil Co. 1 ..... dry

Wells completed 3
Dry 3

WICHITA COUNTY

Kemp & Kempner-A, Arkansas Fuel Oil Co. 28 130
Kemp & Kempner, McCarty Oil Co. 22.. dry
Crudup, Hi-Land Oil Co. 5 65
Mitchell et al, W. H. Hammon 12..... 18
Allen-Foster, G. H. Howell 1 2
Allen-Foster, G. H. Howell 2 12
Crudup, Staniforth et al 3 47
Kemp & Kempner-A, Arkansas Fuel Oil Co. 29 42
Bickley, R. R. Clark et al 1 38
Bickley, R. R. Clark et al 2 21
Taylor, Humble Oil & Refining Co. 23.. 65
Waggoner Brothers-H, T. F. Hunter 1.. dry
Hodges-A, United Producers Co. 13 .. 40
Saunders Estate, Wood Drlg. Co. 1.... dry
Kemp & Kempner-B, Arkansas Fuel Oil Co. 41 42
Waggoner Brothers-A, Continental and Hammond 2 180
Fowler, Everts Drlg. Co. 1 ..... dry

Wells completed 17
Production 702
Dry 4

WILBARGER COUNTY

Waggoner-Sigler, Atlantic Oil Prod. Co. 10 85
Waggoner-C, McCarty Oil Co. 1 90
Waggoner, Moore 1 ..... dry
Waggoner-E, The Texas Company 23.. 20
Waggoner-P, Waggoner Refining Co. 1 110
Waggoner-P, Waggoner Refining Co. 8 120
Dill et al, Zenith Oil Co. 2 45
Waggoner-Sigler, Atlantic Oil Prod. Co. 9 100
Waggoner-M, Dixie Oil Co. 1 ..... dry
WaggonerB, Empire Gas & Fuel Co. 31 90
Waggoner-L, Fain-McGaha Oil Corp. 18 120
Bud-Waggoner, Gray Back Dev. Co. 2.. 75
Eason-Waggoner-A, Gray Back Dev. Co. 1 ..... dry
Waggoner-H, Venmex Oil Co. 1 ..... dry
Waggoner-Sigler, Atlantic Oil Prod. Co. 11 60
Waggoner-D, Cosden & Co. 6 98
Waggoner-C, Lido Oil Co. 5 110
Waggoner-Shanor, Phillips Pet. Co. 1.. 12
Waggoner-S, Staley-Wynne & Co. 5 40
Waggoner-P, Waggoner Refining Co. 9 70
Dill, Zenith Oil Co. 3 30
Waggoner-Sigler, Atlantic Oil Prod. Co. 13 40
Waggoner, Beard et al 1 ..... dry
Waggoner-B, Empire Gas & Fuel Co. 32 98
Waggoner-L, Fain McGaha Oil Corp. 1 60
George, Martin et al 3 ..... dry
L. A. Foster, Simpson-Fell Oil Co. 1.. dry
Waggoner-E, The Texas Company 24 .. 45

Wells completed 28
Production 1518
Dry 7

YOUNG COUNTY

Kisinger, Christie Brothers 2 257
Kisinger, Fultz & Kay 2 400
Kisinger-A, Shaw Oil Corp. 2 408
Robertson, E. G. Christie 1 ..... dry
Wilson, Coleman & Shaw 1 ..... dry
Hardy, W. R. Cooper 1 ..... dry
Doyle, J. M. Dunn 1 ..... dry
Carpenter, Halmack Oil Co. et al 1 43
Taack, T. F. Hunter 1 ..... dry
Winkler-A, E. B. Madden et al 1 ..... dry
Daniel, Nix & Dale 1 30
Jimerson, Panhandle Refining Co. 1.. dry
Hardy, E. R. Riggs and Kliner 1 ..... dry
E. C. Keith, Riner & Omohundro, 1 20
Garvey, Carl Wainwright 2 ..... dry
Wolf, Bolin & Lindsey 2 15
Robinson, Brihill Oil Co. 1 28
Carpenter, Halmack Oil Co. et al 2 .. 107
Carpenter, Hamilton & Anderson 1 .... dry
Lowe, Howard Pet. Co. et al 1 ..... dry
Lowe, Independent D. & P. Co. 1 37
Kunkel, Jones & Sharp 1 ..... dry
Hausler et al, C. B. Long 3 ..... dry
Dunagan, Amos Mitchell 2 20
Watson, Panhandle Refining Co. et al 1 9
Hall, A. H. Parks 1 25
Deitrich, Pet. Prod. and Madden 5 45
Kunkel, Prairie Oil & Gas Co. 7 3
Keeter, Riggs 7 50
Keith, Riner & Bailey 1 ..... dry
Dilbeck, H. F. Rogers 1 ..... dry
Daniel, Stump & Heydrick 5 67
Taack, C. C. Williams, et al 3 20
Hill, D. L. Wolf 5 40
Stephens-Roach Co., Wo-Mac Oil Co. 4 30
Childress Donnell, Mid-Tex O. & G. Co. 5 210
McLaren, Pennell 1..... dry
Payne, Scott & Nance 6 ..... dry
Jeffery, G. A. Alexander et al 1..... dry
Foster, Alexander & Simmons 1 ..... dry
Daniel, Bridwell Oil Co. 1 44
Mullinax, G. B. Chandler 1 ..... dry
W. H. Clarida, T. A. Clarida 1 ..... dry
Hill-B, P. Fowler et al 4 40
Stowe, N. D. Goldsmith 1 15
Hill, Nimrod Oil Co. 2 100
White, Perkins & Butler et al 4 ..... dry
Tucker, George L. Pace et al 1 ..... dry
Dunagan, Perkins & Cullum 1 381
Lemmond, Perkins & Cullum 7 42
Remington, E. Remington 1 27
Keeter, Riggs & Klinger 1 ..... dry
Carpenter, Stump & Heydrick 2 73
Terrell Estate, R. J. Watson 1 ..... dry
Taack, C. C. Williams et al 4 ..... dry
Stephens-Roach Co., Wo-Mac Oil Co. 6 85
Keith, Wood Drilling Co. 1 ..... dry
Jarnigan, Atlantic Oil Prod. Co. and Christie 1 1025
Kisinger, Cunningham et al 3 100
Jarnigan, Independent Oil & Gas Co. 1. 960
Jarnigan, Shaw et al 3 300
Prideaux, Benton Brothers 1 ..... dry
Daniel, Bridwell Oil Co. 2 ..... dry
Carpenter, Halmack Oil Co. et al 3 35
Carpenter, Halmack Oil Co. et al 4 .... dry
Dunagan, J. O. Hays 1 ..... dry
White, S. C. Henley et al 1 ..... dry
Street, Panhandle Refining Co. 1 .... dry
Watson, Panhandle Refining Co. et al 2 dry
Dunagan, Perkins & Cullum 2 550
Dunagan, Perkins & Cullum 3 225
Remington, E. Remington 2 92
Larimore et al, E. R. Riggs 1 ..... dry
Remington, Riggs & Oliphant 1 ..... dry
Rogers, Staley & Wynne 1 ..... dry
Daniel, Stump & Heydrick 6 40
Gragg, The Texas Company 1 ..... dry
Taack, E. D. Willis 1 ..... dry
Stephens-Roach Co., Wo-Mac Oil Co. 7 40
Hargroves, Wooten & Reed 1 ..... dry
McCloud, Nash & Windfohr 1 23,000

Wells completed 81
Production 29,038
Dry 40

WEST TEXAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Andrews	1	152	0	0
Borden	1	0	1	0
Crane	3	535	0	0
Crockett	1	13	0	0
Ector	5	2,884	0	0
El Paso	1	0	1	0
Garza	1	0	1	0
Glasscock	5	5,940	0	0
Howard	7	929	1	0
Irion	5	0	5	0
Jones	2	140	1	0
Loving	1	0	1	0
Mitchell	1	0	1	0
Pecos	23	7,395	7	2
Tom Green	1	0	1	0
Winkler	1	0	1	0
Ward	4	47	2	0
Total April	63	18,035	23	2
Total March	76	16,600	31	0
Difference	13	1,435	8	2

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Crane	2	0	3	5
Crockett	1	1	3	5
Ector	19	3	24	46
Fisher	0	0	2	2
Glasscock	5	2	8	15
Howard	8	6	8	22
Irion	0	3	4	7
Jones	1	1	0	2
Pecos	12	10	32	54
Reagan	1	0	8	9
Runnels	0	2	0	2
Upton	2	2	2	6
Ward	5	6	10	21
Winkler	0	2	5	7
Miscellaneous Counties	5	40	46	91
Total April	61	78	155	294
Total March	48	72	144	264
Difference	13	6	11	30

WELLS COMPLETED

ANDREWS COUNTY

C. E. Ogden, Deep Rock Oil Co. et al 1 152

BORDEN COUNTY

S. I. Munger, Moncrief et al 1 ..... dry

CRANE COUNTY

J. T. McElroy, Gulf Prod. Co. 73 335
Cowden Bros. & Co., C. C. Duffey et al 8 120
Weekley-University, Warner-Quinlan Co. 8 80

Wells completed 3
Production 535

CROCKETT COUNTY

J. M. Shannon, Empire Gas & Fuel Co. 1 13

ECTOR COUNTY

University-T, Landreth Prod. Corp. 2.. 565
Kloh & Rumsey-D, Humble O. & R. Co. et al 2 784
Kloh & Rumsey-D, Humble O. & R. Co. et al 3 559
R. L. York, Humble O. & R. Co. et al 2 382
R. L. York, Humble O. & R. Co. et al 3 594

Wells completed 5
Production 2884

EL PASO COUNTY

W. D. Malone, Lane-Texas Company 1 dry

GARZA COUNTY

Stokes, Pandem Oil Co. 1 ..... dry

GLASSCOCK COUNTY

Kloh et al, Schermerhorn Oil Co. 3 1770
H. Phillips, Group No. 1 and Continental Oil Co. 1 2040
R. C. Coffee ,Simms Pet. Co. 4 2040
L. S. McDowell-C, World Oil Co. 1..... 55
Dora Roberts-C, F. H. E. Oil Co. 2 35

Wells completed 5
Production 5940

HOWARD COUNTY

O. Chalk-C, Continetal Oil Co. 7..... 69
H. Hyman-B, McGinley & Sigler 1 .... dry
H. R. Clay, Simms Pet. Co. 2 40
Dora Roberts, The California Co. 11... 150
H. R. Clay, Simms Pet. Co. 2 40
Dora Roberts, Ward Oil Co. 22 240
Kloh et al, Plymouth Oil Co. 8 390

Wells completed 7
Production 929
Dry 1

IRION COUNTY

J. H. Lindley, J. A. Starkweather et al 1 ..... dry
F. Tankersley, Baker & Hodges et al 1 dry
Fayette Tankersley, Brown & Fox 2... dry
J. M. Nutt, Banner Oil Co. 2 ..... dry
Sawyer Cattle Co., Beesley et al 1 .... dry

Wells completed 7
Dry 5

JONES COUNTY

Coates, Phillips Pet. Co. 1 140
Byrom, Atkinson & Sandefer 1 ..... dry

Wells completed 2
Production 140
Dry 1

LOVING COUNTY

Wheat-H, Lockhart & Co. 1 ..... dry

MITCHELL COUNTY

J. M. Radford, Texas & Wheeler 1 .... dry

PECOS COUNTY

M. A. Smith et al (Tr. A), Gulf Prod. Co. 23 37
University-B, Amerada Pet. Corp. 1 .. 63
Mrs. F. E. Torborg, Dixie Oil Co. 3... 384
T. N. McKenzie, Dixie Oil Co. 1 ..... dry
Mrs. M. A. Smith, Shell Pet. Corp. 12 .. 360
University-D, Shell Pet. Corp. 1 120
University (Bowser), Skelly Oil Co. 2. 600
T. N. McKenzie, Southern Crude Oil Pur. Co. 1 ..... gas
Michaelis et al, Stine & Griffith 1 .... dry
University-C, World Oil Co. 1 ..... dry
University-E, Landreth Prod. Corp. and Henshaw Brothers 1 500
J. A. McDonald, Milham Expl. Co. 1 .. dry
Mrs. M. A. Smith-B, Shell Pet. Corp. 2 444
J. H. Tippett-A, Southern Crude Oil Pur. Co. 4 524
Mrs. M. A. Smith, Transcontinental and Arkansas Fuel Oil Co. 3 40
Mrs. M. A. Smith-A, Transcontinental and Arkansas Fuel Oil Co. 1 ..... gas
T. N. McKenzie, Angelo Pet. Co. et al 1 dry
I. G. Yates, McMan Oil & Gas Co. and Continental Oil Co. 18 360
I. M. Ramsey, Phillips Pet. Co. 5.....3768
Mrs. M. A. Smith, Shell Pet. Corp. 13.. 105
I. G. Yates, Gulf Prod. Co. 28 45
J. A. McDonald, Cosden Oil Co. 1 ..... dry
R. M. Thompson, Galt-Brown 1 ..... dry

Wells completed 23
Production 7395
Dry 7
Gas 2

TOM GREEN COUNTY

Lewis, Ellis et al 1 ..... dry

WINKLER COUNTY

George Sealy, Sun Oil Co. 2 ..... dry

WARD COUNTY

Dakan, Alpine Oil & Dev. Co. 1 12
Lee Costley, C. C. Dorr et al 1 ..... dry
Pecos Mercantile Co., Penn and Atlantic 2 35
Hill & Hill, Southern Crude Oil Pur. Co. 1 ..... dry

Wells completed 4
Production 47
Dry 2

PANHANDLE FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	3	225	0	1
Gray	21	14,624	2	1
Hutchinson	6	255	1	2
Lamb	1	0	1	0
Wheeler	7	0	2	5
Total April	38	15,104	6	9
Total March	24	4,355	4	11
Difference	14	10,749	2	2

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Carson	7	9	14	30
Gray	16	13	50	79
Hutchinson	6	6	22	34
Moore	2	2	2	6
Wheeler	9	5	6	20
Miscellaneous Counties	2	11	5	18
Total April	42	46	99	187
Total March	29	48	94	171
Difference	13	2	5	16

WELLS COMPLETED

CARSON COUNTY

B. F. Block, Dixon Creek Oil Co. 2.... 50
G. W. Deahl, Empire Gas & Fuel Co. 2. gas
B. F. Block, Pansota Oil Co. 1 175

Wells completed 3
Production 225
Gas 1
Gas production 20,000,000

GRAY COUNTY

J. S. Morse, Tripplehorn Oil Co. 1..... 180
Cook-Faulkner, Champlin & Danciger 6.2672
M. Davidson, Danciger et al 1 26

J. E. Wright, Magnolia Pet. Co. 4..... 810
J. E. Arnold, McIlroy Oil Co. 1..... 125
Cook-Faulkner, Champlin & Danciger 4 dry
W. Jackson, Danciger et al 11 175
Cook-Faulkner, Champlin & Danciger, 5-A 1935
Combs & Worley, Humble Oil & Ref. Co. 1 1500
W. W. Harrah, Magnolia Pet. Co. 4.... 30
J. E. Wright, Magnolia Pet. Co. 5 865
J. M. Bell, The Texas Company 1..... gas
J. E. Wright, The Texas Company 1...1,180
J. E. Wright, The Texas Company 2..1165
J. B. Bowers, Gulf Prod. Co. 1.....1077
J. M. Saunders (Tr. A), Gulf Prod. Co. 4 690
J. S. Morse, Grallap et al 1 150
J. S. Morse, Haymer Oil & Gas Co. 1.. dry
Cook-Faulkner, Champlin & Danciger 4-A 400
W. W. Harrah, Dixon Creek Oil Co. 1.. 125
J. E. Wright-Wood, Phillips Pet. Co. 1.1520

Wells completed 21
Production 14,624
Dry holes 2
Gas wells 1
Gas production 7,000,000

HUTCHINSON COUNTY

W. E. Herring, Gulf Production Co. 1 gas
J. E. Prichard-A, Barnsdall Oil Co. 4 180
J. F. Weatherly, American Ref. Co. 7 50
Johnson Bros., Fred Devore 1 25
R. G. Byrd, Skelly Oil Co. 1 ..... gas
W. E. Herring-A, Gulf Prod. Co. 1... dry

Completions 6
Production 255
Dry holes 1
Gas 2
Gas production 22,199,000

LAMB COUNTY

Ellwood, W. H. Dyer 1 ..... dry

WHEELER COUNTY

I. Close, Martin & Debous 4 ..... gas
I. Close, Murchison & Fain 8 ..... gas
I. Close, Murchison & Fain 9 ..... gas
W. B. Wofford, Lone Star Gas Co. 1 dry
I. Close, Murchison & Fain 10 ..... gas
Perry, Murchison & Fain 1..... gas
J. W. Fuller, Lone Star Gas Co. 1 ... dry

Completions 7
Dry holes 2
Gas 5
Gas prodution 91,000,000

SOUTHWEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Mirando	14	1,895	5	1	13	26	39
Darst Creek	33	76,077	3	0	9	4	13
Bruner	2	375	0	0	1	0	1
Ina	1	5	0	0	0	0	0
Dobrowolski .	1	0	0	1	0	1	1
Agua Dulce.	1	0	1	0	0	1	1
Miscellaneous	24	100	19	2	41	82	123
Total Apr..	76	78,452	28	4	64	114	178
Total Mar..	82	28,271	40	6	48	115	163
Difference..	6	50,181	12	2	16	1	15

WELLS COMPLETED

KOHLER POOL—DUVAL COUNTY

Peters, E. H. Buckner 2 ..... gas
Peters, Everett Suladie ..... abd
Kohler, Humble O. & G. Co. 43 10
Kohler, Humble O. & G. Co. 44..... 10

DRISCOLL POOL—DUVAL COUNTY

Driscoll, Robert Driscoll 11 700

SCHOOLFIELD-O'BYRNE—DUVAL COUNTY

Hahl, C. E. Long, Shell Pet. Corp. 5.. abd

JENNINGS POOL—ZAPATA COUNTY

Cuellar, Killam-Duggan "C" 15..... 300
E. Gutierrez, W. R. Shankle 1..... 100
Trevino, A. L. Edgington 2 125
Cuellar, Killam-Duggan "B" 14 500

COLE POOL—WEBB COUNTY

Perez-Leal, South Texas Prod. Co. 1...abd

CAROLINA-TEXAS—WEBB COUNTY

Webster, Geo. S. Marshall 2 150

ALBERCAS POOL—WEBB COUNTY

Bruni, O. W. Killam 1 ..... abd

WILDCATS—DUVAL COUNTY

Ball, National Oil Co. 2 ..... abd

Wells completed 14
Production 1895
Dry 5
Gas 1
Gas production 15,000,000

DARST CREEK—GUADALUPE COUNTY

D. C. Malaer, Gulf Prod. Co. 1 850
Thos. Dix, Magnolia Pet. Co. 7.....1300
Posey, F. L. Thomson 1 150
Tadlock, Humble O. & R. Co. 2 75
Knoblock, Sun Oil Co. 6 4080
Denman, Humble O. & R. Co. 12-A....1100
Denman, Humble O. & R. Co. 11-A... 800
Posey Baker, The Texas Company 2000
S. M. Roamel, Magnolia Pet. Co. 2.... abd
Henry Willie, The Texas Company 5 .. 225
Dallas Wilson, The Texas Company 6.. 400
Knoblock, The Texas Company 4-A.. 3800
Knoblock, The Texts Company 4-A....3800
Manford, Simms Oil Co. 3 1600
Roamel, Magnolia Pet. Co. 1.....34500
L. V. Echols, Magnolia Pet. Co. 1 .... abd
L. V. Echols, Magnolia Pet. Co. 2 .... abd
Knoblock, Empire Gas & Fuel Co. 1 ..5500
Henry Willie, Empire Gas & Fuel Co. 1 800
Appling, Cranfill-Reynolds 2 200
Dowdy, Empire Gas & Fuel Co. 4 200
Dix-McKean, Gulf Prod. Co. 1-B.....2200
Knoblock, Gulf Prod. Co. 2 3900
Tadlock, Gulf Prod. Co. 2 1000
Wilson, Humble O. & R. Co. 4 180
S. M. Roamel, Magnolia Pet. Co. 4 1400
Richburg, Magnolia Pet. Co. 2 200
Roamel, Magnolia Pet. Co. 2-A 55
Lemmie Anderson, The Texas Co. 5....1020
Schmidt et al, The Texas Co. 1 1038
Yates Wilson, The Texas Co. 1 104
Thomas Dix, United N. & S. Dev. Co. 3.1500
Thos. Dix, United N. & S. Dev. Co. 4..2200

Wells completed 33
Production 76,077
Dry 3

REFUGIO FIELD—REFUGIO COUNTY

Shelly, Union Prod. Co. 4 700
Johnson, Pearson Prop. Inc. 1 300
Leisering, Houston Oil Co. 1 300
B. Shelton, Union Prod. Co. 1 ..... abd
Rose Lambert, Houston Gulf Gas Co. 1-A 300
J. J. O'Brien, Mission Drilling Co. 1 .. 750
Carlysle, Morgan Oil Corp. 1 550
Mission River Bed, Ed Price 1 ..... abd
Ryals, Pearson Prop. Inc. 1 1125
B. H. Hornburg, Pearson Prop. Inc. 1 abd
Zarsky, Karona Oil Co. 1 700
J. F. B. Heard, Independent O. & G. Co. B-2 ..... abd
Claud Heard, Independent O. & G. Co. 3.1400
Shelton et al, Houston Oil Co. 1 420
Dorsey et al, Houston Oil Co. 1 450
T. P. Shelly, Independent O. & G. Co. 1 abd
Fannie Heard, Fox & Heflin 1 750
Fox Heirs, Morgan Oil Corp. 1 792
Rooke, Morgan Oil Corp. 1 ..... abd
Shelton, The Texas Company 1 ..... abd
Rooke, Houston Oil Co. 14 250
J. F. Powers, Morgan Oil Corp. 1 .... abd

Wells completed 22
Production 8787
Dry 8

BRUNER FIELD—CALDWELL COUNTY

J. R. Tiller, Humble O. & R. Co. 4-B.. 75
T. Brisco, Gulf Prod. Co. 1 300

INA POOL—MEDINA COUNTY

J. P. Nixon, F. E. Tegler 6 5

DOBROWOLSKI—BEXAR COUNTY

Dobrowolski, Penn-Tex Oil Co. 2 ..... gas

AGUA DULCE FIELD—NUECES COUNTY

Daudermann, Agua Dulce O. & G. Co. and SolTex Prod. Co. 1..... abd

MISCELLANEOUS WILDCATS

Williamson County—

F. P. Simmons, C. P. Link et al 1 75
L. E. Lawrence, Simms Oil Co. 1 .... abd
Fuchs, E. L. Chapman 1 20
W. Fuchs, E. L. Chapman 3 ..... abd
Marie Olive, McNeil & Peterman 1 .... abd

Frio County—

H. W. & R. L. Eschenburg, Frank B. Lefevre 1 ..... abd

Bastrop County—

C. L. Lackey, H. C. Cate et al 1 ..... abd

Guadalupe County—

St. Charles, Turman et al No. 1 ..... abd
Waldrip, Mid-Kansas Oil Co. 1 ..... abd

Bexar County—

H. C. Gayle, Texas Petroleum Co. 3.... 5
Kelso, Dingman Drilling Co. 2 ..... abd
Minna Corith, W. H. Wallace et al 1.. abd

Wilson County—

Shook, Empire Gas & Fuel Co. 1..... abd

Atascosa County—

J. Hoffman, Frontier Oil Co. 1..... abd

Caldwell County—

B. Lynch, S. H. Cargill 1 ..... abd

Bee County—

Geo. A. Ray, Morgan Oil Corp. 1 .... abd
Mrs. R. A. McKinney, Morgan Oil Corp. 1 ..... gas

Brooks—County—

Wm. Singer, Humble and Shell Oil Corp. 1 ..... abd

Live Oak County—

Mrs. A. Smith, O'Neil & Catlett 1 .... abd

Karnes County—

R. W. Tom, T. P. Morgan et al 1 .... abd

Jackson County—

Drushel, Wright Bros. 7 ..... gas

Goliad County—

Geo. Ray, Wm. F. Morgan 1 ..... abd

DeWitt County—

F. Clark, Townsend et al 1 ..... abd

McMullen County—

J. B. Baker, Southern Crude Oil Pur. Co. 1 ..... abd

Wells completed 24
Production 100
Dry 19
Gas 2
Gas production 50,000,000

EAST CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Anderson	3	0	3	0	0	4	4
Angelina	0	0	0	0	1	0	1
Camp	0	0	0	0	0	1	1
Fannin	0	0	0	0	0	1	1
Freestone ...	0	0	0	0	0	5	5
Henderson ..	0	0	0	0	0	3	3
Hill	0	0	0	0	0	4	4
Hopkins	0	0	0	0	0	1	1
Hunt	1	0	1	0	0	0	0
Limestone ...	1	0	1	0	0	4	4
Navarro	0	0	0	0	0	1	1
Rusk	0	0	0	0	0	2	2
Smith	1	0	1	0	0	3	3
Van Zandt ..	9	25,000	0	0	5	22	27
Woods	0•	0	0	0	0	4	4
Total April.	15	25,000	6	0	6	55	61
Total March	29	9,406	19	0	6	38	44
Difference..	14	15,594	13	0	0	17	17

WELLS COMPLETED

ANDERSON COUNTY

Posey—Johnson, Humble Oil & Refining Co. 1 ..... abd
Boggy Creek—Williams, Magnolia Petroleum Co. 2 ..... abd
Moody, Roeser & Pendleton 1 ..... abd

HUNT COUNTY

George, Dilworth & Hager 1..... abd

LIMESTONE COUNTY

Mexia-Powell—Jensen & Baggett 2 .... abd

SMITH COUNTY

Peoples Bank, East Texas Petroleum Corp. 1 ..... abd

VAN ZANDT COUNTY

Freeman, Humble Oil & Refining Co. 1.1500
E. L. Fowler, Pure Oil Co. 3 2500
Ellison, Pure Oil Co. 1 2000
Clark Heirs, Pure Oil Co. 1 2500
R. H. Peters, Pure-Hill & Hill 1 3000
J. T. Thompson, Pure Oil Co. 2 3000
R. L. Wells, Pure Oil Co. 1 3000
W. T. Jarman, Pure Oil Co. 2 2500
B. M. Fowler, Shell Petroleum Corp. 1.5000

Wells completed 9
Production 25,000

GULF COAST FIELDS

Summary of Field Operations
Southeast Texas

County—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Barbers Hill.	8	5,855	1	0	1	28	29
Batson	3	33	1	0	0	1	1
Big Creek ...	3	1,350	2	0	0	2	2
Blue Ridge..	3	440	0	0	0	1	1
Boling	1	75	0	0	0	0	0
Clay Creek ..	2	300	1	0	0	2	2
DeWalt	1	745	0	0	0	3	3
Esperson	3	540	0	0	0	5	5
Fannett	2	0	2	0	0	1	1
Goose Creek..	1	0	1	0	0	2	2
Hankamer	2	750	1	0	1	1	2
High Island..	2	3,100	0	0	0	2	2
Hull	3	475	0	0	0	5	5
Humble	9	4,075	3	0	2	11	13
Liberty	4	166	2	0	0	2	2
Lost Lake ..	1	0	1	0	0	2	2
Nash	1	0	1	0	0	1	1
North Dayton	1	855	0	0	0	4	4
Orange	2	150	0	0	0	0	0
Orchard	0	0	0	0	0	2	2
Pierce J'nct'n	2	1,200	1	0	1	6	7
Raccoon Bend	3	750	0	0	2	7	9
Refugio	17	6,937	2	1	3	33	36
Saratoga	3	7	1	0	0	1	1
Sour Lake ..	6	81	1	0	0	1	1
Spindletop ..	11	4,878	2	0	3	7	10
Miscellaneous.	12	0	11	1	3	35	38
Total April.	105	32,762	34	2	16	165	181
Total Mar..	106	42,583	30	4	28	147	175
Difference..	1	9,821	4	2	12	18	6

South Louisiana

Anse La Butte	1	0	1	0	0	0	0
Bayou Bouil'n	1	0	1	0	1	1	2
Bayou Blue..	1	70	0	0	0	2	2
Edgerly	1	0	1	0	0	0	0
Hackberry ..	3	1,650	1	0	0	5	5
Jennings	1	0	1	0	0	3	3
Lockport	2	900	0	0	1	3	4
Port Barre ..	3	1,500	2	0	0	2	2
Sorrento	1	350	0	0	0	0	0
Starks	1	80	0	0	0	1	1
Sulphur	2	2,500	1	0	0	1	1
Sweet Lake..	0	0	0	0	0	1	1
Vinton	0	0	0	0	1	2	3
Miscellaneous.	8	0	8	0	4	18	22
Total April.	25	7,050	16	0	7	39	46
Total Mar..	20	9,810	11	0	10	47	57
Difference..	2	2,760	5	0	3	8	11
Ttl. Gulf Coast April	130	39,812	50	2	23	204	227
Ttl. Gulf Coast March	126	52,393	41	4	38	194	232
Difference..	4	12,581	9	2	15	10	5

GULF COAST COMPLETIONS
TEXAS

BARBERS HILL—CHAMBERS COUNTY

Barber, Mills Bennett Production Co. 2 abd
Gulf Fee, Mills Bennett Production Co. 1 2235
Kirby, Humphreys Corp. 4-H 315
Higgins, McAlbert Oil Co. 1 750
Wilburn, Sinclair Oil & Gas Co. 9 1100
Chambers, Yount Lee Oil Co. 11 5
Chambers, Yount Lee Oil Co. 13 1260
Woodward, Yount Lee Oil Co. 6 190

Wells completed 8
Production 5855
Abandoned 1

BATSON—HARDIN COUNTY

Sun, Ada Belle Oil Co. 134 30
Bates, East Batson Oil Co. 9 ..... abd
Heywood, Paraffin Oil Co. 35 3

Wells completed 3
Production 33
Abandoned 1

BIG CREEK—FORT BEND COUNTY

Ahlers, Benedum & Trees 1 ..... abd
Davis, Gulf Production Co. 21 1350
Hausler, Navarro Oil Co. 4 ..... abd

Wells completed 3
Production 1350
Abandoned 2

BLUE RIDGE—FORT BEND COUNTY

West—Schenck, Humphreys Corp. 3.... 315
Blakely, Telshaw et al 1 125

Wells completed 2
Production 440

BOLING—WHARTON COUNTY

Woytek, Hyde Gayle 15 75

CLAY CREEK—WASHINGTON COUNTY

G. F. Grote, Sun Oil Co. 8 300
Draeger, Sun Oil Co. 1 ..... abd

Wells completed 2
Production 300
Abandoned 1

DeWALT—FORT BEND COUNTY

Bankers Mortgage, Humble Oil & Refg. Co. 3-B 745

ESPERSON—LIBERTY COUNTY

Moores Bluff, Cranfill-Reynolds Co. 2.. 350
Esperson, Cranfill-Reynolds Co. 3 100
Moores Bluff, Yount Lee Oil Co. 2 90

Wells completed 3
Production 540

FANNETT—JEFFERSON COUNTY

Guy Junker, Gulf Production Co. 1-A.. abd
Bordages, Gulf Production Co. 8 ..... abd

Wells completed 2
Abandoned 2

GOOSE CREEK—HARRIS COUNTY

Scorrega, J. M. West 3 ..... abd

HANKAMER—LIBERTY COUNTY

Weiser, Gulf Production Co. 1 ..... abd
Boyt, Gulf Production Co. 5 750

Wells completed 2
Production 750
Abandoned 1

HIGH ISLAND—GALVESTON COUNTY

Smith, Gulf Production Co. 5-A 2000
Cade, Marrs McLean 1100

Wells completed 2
Production 3100

HULL—LIBERTY COUNTY

Barngrover, Houston Production Co. 13. 300
Dolbear, Republic Production Co. 63 .. 75
Dolbear, Republic Production Co. 79 .. 100

Wells completed 3
Production 475

HUMBLE—HARRIS COUNTY

Hirsch, Dunbar & Deering 1 ..... abd
O'Boyle, Houtex Oil Co. 1 ..... abd
Williams, Humble Oil & Refg. Co. 11 .. 450
Wheeler & Dickens, T. P. Lee 1 75
Hull, Showers & Moncrief 1 ..... abd
Perkins, Smith & Sullivan 1 ..... abd
Allo, Southern Drlg. & Prod. Co. 1 1000
Burt, South Texas Petroleum Co. 2 1800
Landslide, The Texas Company 271 750

Wells completed 9
Production 4075
Abandoned 3

LIBERTY—LIBERTY COUNTY

Barrett, Mecom Oil Co. 1 ..... abd
Mitchell, Sun Oil Co. 7 126
Mitchell, Sun Oil Co. 40 40
Greene, The Texas Company 6 ..... abd

Wells completed 4
Production 166
Abandoned 2

LOST LAKE—CHAMBERS COUNTY

Lost Lake, Pure Oil Co. 4 ..... a d

NASH—BRAZORIA COUNTY

Wisdom, Rycade Oil Corp. 26 ..... abd

NORTH DAYTON—LIBERTY COUNTY

Jamison, Harrison Oil Co. 1 855

ORANGE—ORANGE COUNTY

Leon, Sinclair Oil & Gas Co. 2 75
Chesson, Orange Petroleum Co. 6 75

Wells completed 2
Production 156

PIERCE JUNCTION—HARRIS COUNTY

Dooley, Navarro Oil Co. and Texas Expl. Co. 18 1200
Settegast, Rio Bravo Oil Co. 13-A .... abd

Wells completed 2
Production 1200
Abandoned 1

RACCOON BEND—AUSTIN COUNTY

Deutrich, Humble Oil & Refg. Co. and Valley Oil Corp. 9-A 50
Helmuth, Humble Oil & Refg. Co. and Valley Oil Corp. 3 250
Saunders, Humble Oil & Refg. Co. and Valley Oil Corp. 5 430

Wells completed 3
Production 730

REFUGIO—REFUGIO COUNTY

Tom Heard, Houston Oil Co. 1 100
Doughty, Houston Oil Co. 1 75
Rooke, Houston Oil Co. 11 250
Leisering, Houston Oil Co. 1 300
Claude Heard, Independent Oil & Gas Co. 5 625
West, Independent Oil & Gas Co. 3 .... gas
J. F. B. Heard, Edwin M. Jones 1-A 500
Strauch, Larco Co. 4 300
O'Brien, Moody-Seagraves Prod. Co. 1..1500
City, Morgan Oil Corp. 6 1075
Power, Morgan Oil Corp. 1 ..... abd
Johnson, Pearson Properties 1 300
Mission River, Ed Price 1 ..... abd
Cable, Strube & Strube 1 500
Rose Lambert, Union Prod. Co. 1-A 212
Morgan-Vance, Union Prod. Co. 3 700
Shelly, Union Prod. Co. 4 500

Wells completed 17
Production 6937
Abandoned 2
Gas 1

SARATOGA—HARDIN COUNTY

Cotton, Rio Bravo 80-A 5
Cotton, Rio Bravo 80-C ..... abd
Cotton, Rio Bravo, 82-B 2

Wells completed 3
Production 7
Abandoned 1

SOUR LAKE—HARDIN COUNTY

Gilbert, Gilbert Oil Co. 107 6
Minor, Lake View Oil Co. 8 ..... abd
Fee, Minor Oil Co. 68 5
Fee, Minor Oil Co. 87 10
Merchant, M. E. Peveto 1 20
More, H. M. Terry 1 40

Wells completed 6
Production 81
Abandoned 1

SPINDLETOP—JEFFERSON COUNTY

McFaddin, Yount Lee Oil Co. 2 ..... abd
Gladys City, Yount Lee Oil Co. 61 33
McFaddin, Yount Lee Oil Co. 79 180
McFaddin, Yount Lee Oil Co. 89 1550
McFaddin, Yount Lee Oil Co. 97 120
Gladys City, Yount Lee Oil Co. 99 .... a d
McFaddin, Yount Lee Oil Co. 124 240
McFaddin, Yount Lee Oil Co. 128 375
McFaddin, Yount Lee Oil Co. 129 1700
McFaddin, Yount Lee Oil Co. 130 140
Gladys City, Yount Lee Oil Co. 82 540

Wells completed 11
Production 4878
Abandoned 2

MISCELLANEOUS COUNTIES

Austin County—
Brenham-Hess, Lyne Oil Co. 15 ..... abd
McDade, McInnery et al 1 ..... abd

Burleson County—
Hill, Mellon Oil Co. 1 ..... abd

Harris County—
Mykawa-Sladous, Higgins Oil & Fuel Co. 1 ..... abd
Mykawa-Hubert, Watts Oil Co. 1 ..... abd
Highland, Richland Oil Corp. 1 ..... abd

Jackson County—
Edna-Drushell, Wright Brothers 7 .... gas

Jefferson County—
Hooks-Bordage, Bayou Oil Co. 1 ..... abd
Pipkin, The Texas Company 2 ..... abd

Walker County—
Delta Ld. & Timber Co., The Texas Company 1 ..... abd

Washington County—
Hughes, W. D. Anderson 1 ..... abd
Nowak, L. O. Gleason 1 ..... abd

Wells completed 12
Production 0
Abandoned 11
Gas 1
Gas production 17,000,000

SOUTH LOUISIANA

ANSE LA BUTTE—ST. MARTIN PARISH
Herbert heirs, Yount Lee Oil Co. 1 .... abd

BAYOU BOUILLON—ST. MARTIN PARISH
St. Martin, The Texas Company 2 .... abd

BAYOU BLUE—IBERVILLE PARISH
Schwing, Standard Oil Co. 2 70

EDGERLY—CALCASIEU PARISH
Paraffin, Hercules Oil Co. 3 ..... abd

HACKBERRY—CAMERON PARISH
Watkins, Calcasieu Oil Co. 17 1600
Francis Duhon, Sutton Oil Co. 2 50
State, The Texas Company 6 ..... abd

Wells completed 2
Production 1650
Abandoned 1

JENNINGS—ACADIA PARISH
Conklin, Cline, Smith & Cline 10 ..... abd

LOCKPORT—CALCASIEU PARISH
Moss, Union Sulphur Co. 1 600
Miller, Vacuum Oil Co. 25 300

Wells completed 2
Production 900

PORT BARRE—ST. LANDRY PARISH
Gaudet, Gulf Refining Co. 3 ..... abd
Botany Bay, The Texas Company 5 ... 1500
Botany Bay, The Texas Company 6 .... abd

Wells completed 3
Production 1500
Abandoned 2

SORRENTO—ASCENSION PARISH
United, Gulf Refining Co. 18 350

STARKS—CALCASIEU PARISH
Lutcher-Moore, Gulf Refining Co. 20 .. 80

SULPHUR—CALCASIEU PARISH
Fee, Union Sulphur Co. 757 2500
Fee, Union Sulphur Co. 758 ..... abd

MISCELLANEOUS LOUISIANA

Acadia Parish—
Abshire, Charles P. Siess, trustee 1 .. abd

LaFourche Parish—
City of New Orleans, Gulf Refining Co. 1 ..... abd

Plaquemines Parish—
Lake Grand Ecaille-Cockrell, Humble Oil & Refg. Co. 1 ..... abd

St. Martin Parish—
Hager-Fee, The Texas Company 1 .... abd
Hager, Iberville, The Texas Company 1.. abd

St. Mary Parish—
Patterson-Zenor, Vacuum Oil Co. 1 .... abd

Terrebonne Parish—
Lake Pelto-State, The Texas Company 3 ..... abd
Caillou Island-State, The Texas Company ..... abd

Wells completed 8
Production 0
Abandoned 8

EAST TEXAS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Drlg.	Ttl.
Camp.	0	0	0	0	0	1	1
Harrison	0	0	0	0	1	1	1
Marion	0	0	0	0	1	1	1
Panola	4	0	0	4	1	4	5
Red River	0	0	0	0	0	3	3
Shelby	0	0	0	0	0	2	2
Total Apr.	4	0	0	4	3	12	15
Total Mar.	3	0	0	3	2	13	15
Difference	1	0	0	1	1	1	0

*Gas production: Panola, 12,573,000.

WELLS COMPLETED
PANOLA COUNTY

E. F. Mitcheson Sur.: Werner, Ark.-La. P. L. Co. 11 ..... gas
Jane Thorp Sur.: Tiller, Magnolia Pet. Co. 2 ..... gas
Jane Thorp Sur.: Tiller, Magnolia Pet. Co. 6 ..... gas
B. C. Jordan Sur.: Roquemore, Nat. Gas Producing Co. 6 ..... gas

Gas production 12,573,000

MISSISSIPPI
HINDS COUNTY

2-5-1e L. L. Mayes, Jackson Oil & Gas Co. 1 ..... gas

Gas production 2,000,000

MISSOURI

ST. LOUIS COUNTY

St. Louis—Benjamine-Baumhoff, M. M. McCurdy, 1 ..... drlg
Fee, Hoffman Bros. Construction Co. 1 ..... drlg

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Drlg.	Ttl.
Avoyelles	0	0	0	0	0	1	1
Bossier	22	1,151	11	0	24	35	69
Bienville	0	0	0	0	0	1	1
Caddo	5	1,205	0	0	3	11	14
Catahoula	1	0	1	0	1	0	1
Claiborne	0	0	0	0	0	2	2
Concordia	0	0	0	0	0	1	1
DeSoto	0	0	0	0	7	4	11
Franklin	0	0	0	0	0	3	3
Jackson	0	0	0	0	1	0	1
LaSalle	0	0	0	0	1	3	4
Morehouse	5	0	0	5	3	2	5
Natchitoches	0	0	0	0	0	2	2
Ouachita	6	0	0	6	10	6	16
Rapides	0	0	0	0	0	1	1
Red River	0	0	0	0	1	1	2
Richland	8	0	3	5	13	14	27
Sabine	19	2,315	9	1	21	40	61
Tensas	0	0	0	0	0	1	1
Union	3	0	0	3	3	3	6
Webster	2	100	0	0	0	5	5
West Carroll	1	0	1	0	0	1	1
Total Apr.	72	4,771	25	20	88	137	225
Total Mar.	59	6,915	21	9	89	146	235
Difference	13	2,144	4	11	1	9	10

*Gas production: Morehouse, 56,902,972; Ouachita, 7,912,000; Richland, 184,960,000; Sabine, 23,800,000; Union, 10,807,000; total, 284,381,972 feet.

WELLS COMPLETED
BOSSIER PARISH

25-23-12 Barnett, Ark. Fuel Oil Co. 1.. 25
31-23-12 Bollinger, Ark. Fuel Oil Co. 2. 200
26-23-11 May, Bahan & Bahan, Air Lift Oil Co. 1 95
25-23-12 Pleasant, Bahan & Bahan, Air Lift Oil Co. 1 ..... dry
14-19-11 Larkin, R. L. Crook, 12 6
26-23-12 Martin, Haynes Bros. 1 ..... dry
36-23-12 Garrett, Lee Kinnebrew 1.... dry
26-21-14 LeRosen, S. P. Lanier et al 1. abd
23-23-12 Farrington, Lide et al 1..... dry
31-23-11 Bain, Louisiana Pet. Corp. 2.. dry
21-19-11 Wetherbee, H. I. Morgan 3.... dry
16-23-12 Dodson, Magnolia Pet. Co. 1.. dry
31-23-11 Kilgore, Muslow Oil Co. 2-A.. 200
31-23-11 U. S. Gov't., Nat. Gas Prod. Co. 2 25
23-21-14 Biedenharn, Nell & Lanier 1 .. dry
38-23-11 Bollinger, Northwest La. Gas Co. 1 15
30-23-11 Bollinger, Phillips Pet. Co. 1.. abd
30-23-11 Bolin, Phillips Pet. Co. 2 10
30-23-11 Bolin, Phillips Pet. Co. 3 .... dry
30-23-11 Bolin, Phillips Pet. Co. 4 .... dry
36-23-12 Holmes, Tippett Drlg. Co. 1.. 190
30-23-11 Peyton, The Texas Company 4 dry
30-23-11 Peyton, The Texas Company 6 85
36-23-12 Wilkinson, The Texas Company 5 300

Wells completed 22
Production 1151
Dry 11

CADDO PARISH

22-22-15 Jolly, Bayou State Oil Corp. 29 25
29-20-15 Nunnely, Falcon Oil Co. 3..... 1000
34-21-15 Levee Board, Gulf Ref. Co. 25-A 45
10-20-16 U. S. Gov't, H. M. Mattson 1.. 10
32-21-15 Hicks, Shreveport Oil Corp 4.. 125

Wells completed 5
Production 1205

CATAHOULA PARISH

26-9-6 Taliaferro, Lochnager Pet. Co. 1 dry

MOREHOUSE PARISH

3-20-4 Feazel, Bahan & Bahan 3.... gas
29-21-5 Crossett, La. Gas & Fuel Co. 25 gas
33-21-5 U. S. Gov't, Magnolia Pet. Co. 8 gas
27-20-4 Wright, J. A. Noe et al 1..... gas
34-21-4 Tensas, Southern Carbon Co. 14 gas

Wells completed 5
Gas 5
Gas production 56,902,972

OUACHITA PARISH

25-18-5 W. Va. Timber Co., J. L. Bullock, Tr. 1 ..... dry
47-18-4 Johnson, Chauvin Gas Co. 4.. gas
46-18-4 Breard, La. Gas & Fuel Co. 1. gas
2-18-3 Fee 401, Magnolia Pet. Co. 2.. abd
7-18-4 W. Va. Timber Co., Shu-Van Gas Prod. Co. 4 ..... gas
15-19-5 Puckett, United Carbon Co. 2 dry
6-18-4 Spade, United Carbon Co. 4.... gas

Wells completed 6
Gas 6
Gas production 7,912,000

RED RIVER PARISH

11-14-11 Sample, LeGrande et al (rig). abd

RICHLAND PARISH

24-16-5 E. A. & F. B. Sartor, Ark-La. P. L. Co. 3-B ..... gas
32-17-6 Mulhern, La. Gas & Fuel Co. 1-A ..... gas
35-16-6 B. F. Chapman, Palmer Corp. 1 abd
2-16-6 Earle, Palmer Corp. 1-A..... gas
7-16-6 Rhymes, Palmer Corp. 7..... gas
29-18-7 Singleterry, Richland Oil & Gas Co. 1 ..... dry
17-15-7 Buie, Shreveport Contractors, Inc. 1 ..... dry
16-16-6 Hale, Southern Carbon Co. 1.. gas
16-16-6 H. Lindow, Southern Carbon Co. 1 ..... dry

Wells completed 9
Dry 3
Gas 5
Gas production 184,960,000

SABINE PARISH

32- 8-12 Nunn, Ark. Fuel Oil Co. 1. .. dry
3- 9-12 Gay et al, Bridges-Clark Oil Co. 1 ..... gas
30-10-11 McWilliams, Bridges-Clark Oil Co. 1 ..... dry
31- 8-12 Bolin, G. H. Broderick 1..... 393
31- 8-12 Davis & Tyson, Neville & Roberts 1 75
32- 8-12 Nunn, Dixie Oil Co. 1 55
31- 8-12 Bolin, Bob Elmore 1 ..... dry
31- 8-12 Sabine Lbr. Co., G. A. Henshaw et al 2-A ..... dry
32-10-12 Moore, Hatcher et al 1..... abd
31- 8-12 Noble, Herbert Oil Co. 1..... abd
36- 8-12 Krouse, Lacy et al 1 ..... dry
6- 7-12 Haley, G. M. LeGrand 1..... dry
31- 8-12 Sabine Lbr. Co., Llde et al 2.. 30
34- 8-12 Bowman-Hicks, Loring Oil Co. 3 40
34- 8-12 Sabine Lbr. Co., Loring Oil Co. 1 1490
33-10-12 McLeroy, Magnolia Pet. Co. 2.. 30
32- 8-12 Bowman-Hicks, Ohio Oil Co. 4 122
32- 8-12 Leone, Olsan Bros. et al 1.... 80
19- 8-12 Anderson, Sabine O. & G. Co. 1 dry
32- 8-12 Nunn, Standard Oil Co. 1 .... dry
18- 8-13 Long-Bell, A. H. Tarver 2.... dry

Wells completed 19
Production 2315
Dry 9
Gas 1
Gas production 23,800,000

UNION PARISH

32-21-3 Guinn, Greenwood Prod. Co. 1.. gas
2-20-3 Spencer, W. S. Hall 4 ..... gas
19-20-4 McInnis, United Carbon Co. 1.. gas

Wells completed 3
Gas 3
Gas production 10,807,000

WEBSTER PARISH

1-22-11 Womble, E. W. Bateman 3.... 80
36-23-11 Slack, Pat Hudson 1 20

WEST CARROLL PARISH

4-21-11 R. E. Brown, H. L. Hunt 1.... dry

ARKANSAS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rigs	Drlg.	Ttl.
Ashley	0	0	0	0	0	1	1
Calhoun	0	0	0	0	1	0	1
Cleburne	0	0	0	0	0	2	2
Columbia	0	0	0	0	0	1	1
Drew	0	0	0	0	0	1	1
Faulkner	0	0	0	0	1	0	1
Franklin	0	0	0	0	1	0	1
Garland	0	0	0	0	0	1	1
Johnson	1	0	0	1	0	1	1
Little River	0	0	0	0	0	2	2
Logan	0	0	0	0	0	1	1
Madison	1	0	1	0	0	0	0
Nevada	0	0	0	0	0	1	1
Ouachita	4	0	4	0	2	3	5
Pike	0	0	0	0	0	1	1
Prairie	1	0	1	0	0	0	0
Pope	0	0	0	0	0	2	2
St. Francis	0	0	0	0	0	1	1
Union	8	1,085	2	0	10	11	21
Van Buren	0	0	0	0	0	1	1
Washington	1	0	1	0	1	3	4
White	0	0	0	0	0	1	1
Total Apr.	16	1,085	9	1	17	34	51
Total Mar.	16	213	10	0	9	45	54
Difference	2	872	1	1	8	11	3

*Gas production: Johnson, 25,000,000.

WELLS COMPLETED
JOHNSON COUNTY

14-10-24 Patterson, Ark.-La. Pipe Line Co. 1 ..... gas

Gas production 25,000,000

MADISON COUNTY

11-14-28 Skinner, Phillips Pet. Co. and F. S. Craver 1 ..... dry

OUACHITA COUNTY

31-15-17 M. V. Smith, Artex Oil Co. 1.. dry
25-15-18 Wilson, McDonald Bros. 2 .... dry
32-15-15 Sid Umstead, Standard Oil Co. 8-B ..... dry
26-15-15 Watts, Wingfield et al 1 ..... dry

PRAIRIE COUNTY

36-2n-6 Louis Novak, Transcontinental Oil Co. 1 ..... dry

UNION COUNTY

13-17-14 Bates, O. W. Estes 1 ..... dry
2-16-16 Bradley, E. L. Chapman 2 15
3-16-16 Epps, E. L. Chapman 1 15
9-18-13 School, E. L. Chapman 1 .. abd
17-18-12 Norris, E. L. Hunt 1 ..... dry
14-18-14 Tate, Johnson Drilling Co. 1.. 10
14-18-14 Union Sawmill, Modisette Drilling Co. 3 55
10-18-13 Simmons, Marine Oil Co. and Simms Oil Co. 1 490
10-18-13 Winn, Marine Oil Co. 2-B 500

Wells completed 8
Production 1085
Dry 2

WASHINGTON COUNTY

12-16-32 Boyd, O'Hara & Shetterly 1.. dry

MISSISSIPPI

Summary of Field Operations

	Rigs	Drlg	Ttl.
Alcorn	0	1	1
Chickasaw	0	1	1
Harrison	1	0	1
Hinds*	0	2	2
Humphreys	0	1	1
Lafayette	0	1	1
Lauderdale	1	2	3
Lincoln	0	1	1
Monroe	0	3	3
Rankin	1	1	2
Warren	0	1	1
Yalobusha	0	1	1
Yazoo	0	1	1
Total Apr.	3	16	19
Total Mar.	3	17	20
Difference	0	1	1

*One completion, 2,000,000 feet gas.

ALABAMA

Summary of Field Operations

	Rigs	Drlg	Ttl.
Lamar	0	1	1
Lauderdale	1	0	1
Marion	1	0	1
Washington	0	2	2
Total Apr.	2	3	5
Total Mar.	2	3	5
Difference	0	0	0

KENTUCKY FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Warren	2	1	1	0	0	0	0
Ohio	65	1,404	22	4	4	40	44
Daviess	14	270	4	0	1	21	22
Hancock	1	5	0	0	0	2	2
McLean	4	110	0	0	0	9	9
Henderson	27	547	3	0	0	24	24
Webster	0	0	0	0	0	3	3
Butler	0	0	0	0	1	1	2
Muhlenberg	1	0	0	1	0	9	9
Hopkins	0	0	0	0	0	7	7
Christian	0	0	0	0	2	2	4
Breckenridge	0	0	0	0	0	1	1
Union	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Caldwell	0	0	0	0	0	1	1
Cumberland	0	0	0	0	0	2	2
Wayne	2	2	0	0	0	1	1
McCreary	2	14	0	0	0	0	0
Powell	0	0	0	0	0	1	1
Estill	0	0	0	0	0	3	3
Wolfe	2	1	1	0	0	0	0
Lee-Owsley	0	0	0	0	0	3	3
Lawrence-Johnson	5	16	0	0	0	1	1
Johnson-Magoffin	1	1	0	0	1	3	4
Floyd	0	0	0	0	0	1	1
Clay	0	0	0	0	3	0	3
Jackson	1	0	1	0	1	0	1
Knox	0	0	0	0	0	1	1
McCracken	0	0	0	0	1	0	1
Madison	0	0	0	0	0	1	1
Total Apr.	127	2,371	32	5	14	140	154
Total Mar.	82	2,893	20	4	13	112	125
Difference	45	522	12	1	1	28	29

WELLS COMPLETED
WARREN COUNTY

Bowling Green—Hobson Heirs, J. H. Wright 12 1
S. B. Blewett, Schriber & Co. 1 .... dry

Wells completed 2
Production 1
Dry 1

OHIO COUNTY

Hartford—W. B. Kelley, The Ohio Oil 14 50
P. R. Wells, The Ohio Oil 1 ..... dry
C. W. Morgan, Rex-Pyramid Oil 13.. dry
S. C. Rhodes, The Ohio Oil 5 ..... dry
Nancy Farmer, S. R. Sirman 24..... 20
Nancy Farmer, S. R. Sirman 25 20
Jess Mattingley, S. R. Sirman 1 .... dry
W. P. Howard, Jas. C. Ellis 7 70
W. P. Howard, Jas. C. Ellis 8 35
G. W. Burdette, Jas. C. Ellis 5 ..... dry
Jim Crow, Jas. C. Ellis 1 ..... gas
Jas. D. Bell, Jas. C. Ellis 1 ..... gas
K. B. Westerfield, Jas. C. Ellis 1.... dry
Zack King, Chester Oil 3 10
Nancy Wiggington, C. M. Root 9.... 50
Nancy Wiggington, C. M. Root 10.... 80
Nancy Wiggington, C. M. Root 11.... 10
Nancy Wiggington, C. M. Root 12.. dry
V. C. Steele, C. M. Root 7 15
V. C. Steele, C. M. Root 8 15
V. C. Steele, C. M. Root 9 20
S. L. Lloyd, Cumberland Pet. 4 30
S. L. Lloyd, Cumberland Pet. 5 30
S. L. Lloyd, Cumberland Pet. 6 35
S. L. Lloyd, Cumberland Pet 7 40
David Brooks, Cumberland Pet. 1 150
Ben Sharp, Cumberland Pet. 1 5
B. Giriens, Bigler & Becker 2 ..... dry
Watkins Heirs, Bigler & Becker 1 .... dry
Grigs Roby, J. H. McClurkin & Co. 1 dry
Knott, Louisville Gas & Electric 1 .. 10
R. A. Miller, Louisville Gas & Elec. 5 10
R. A. Miller, Louisville Gas & Elec. 6 5
R. A. Miller, Louisville Gas & Elec. 7 10
Arthur Whitehouse, Hupp, Duff & Co. 2 ..... gas
J. A. Stewart, Hupp, Duff & Co. 8 .. 40
J. A. Stewart, Hupp, Duff & Co. 9.. 40
J. A. Stewart, Hupp, Duff & Co. 10.. 250
J. A. Stewart, Hupp, Duff & Co. 11.. 10
Ellis Bartlett, Hupp, Duff & Co. 17.. 125
C. W. Newton, Boop & McDonough 1 dry
J. H. Milligan, Dixon Oil 2 5
Louisville Stock Land, Creek Drilling 1 ..... dry
C. Riley, Oliver Jenkins & Co. 1.... dry
Jewell Heirs, E. C. Kolb 2 ..... dry
H. Westerfield, Dug Bolling 1 ..... dry
Tom Westerfield, Leeper Oil 6 35
J. W. Greer, Leeper Oil 2 15
C. H. Greer, Rudolph & Kirkpatrick 12 25
C. H. Greer, Rudolph & Kirkpatrick 13 10
E. E. Puqua, John Breen, Jr. Co. 1.. dry
J. L. & J. H. Ralph, Chester, Claypool & Co. 17 15
C. A. Kelley, Penn-Indiana Oil 12.. 5
C. A. Kelley, Penn-Indiana Oil 13 .. 10
Burdette Heirs, Wood Oil 1 ..... gas
Helton, White & Vickers 1..... dry
C. G. Harrison, Ford, Buckner & Co. 1 10
Chas. Roach N. 130-a, E. G. Purtle & Co. 7 ..... dry
Schultz, Watts & Vickers, 1..... 30
Norris Heirs, Fred Weir & Co. 13 48
Allie Evans, Union Oil 2 8
Tilda Hilton, H. Ford & Co. 1 ..... dry
C. P. Brown, Hupp, Duff & Co. 1 .... dry

Tom Fuqua, Hupp, Duff & Co. 1 .... dry
J. L. & J. H. Ralph, Chester, Claypool & Co. 16 .... dry

Wells completed 65
Production 1404
Dry 22
Gas 4

DAVIESS COUNTY

Owensboro—Frank Fuqua, Wah-Shah-Shee Oil 2 100
Zulu Johnson, Mecca Oil 4 15
Ed Bennett, Smith Randolph & Co. 1 dry
H. Asher, Proctor & Co. 2 .... dry
I. J. Clark, Evans & Garrison 4 15
J. M. Clark, Evans & Garrison 3 15
J. M. Clark, Petroleum Exploration 5 20
J. W. Howard 25-A, Creek Drilling 4 10
Ethel Chapman, Eastern Gulf Oil 5 25
R. H. Blackerby, Leeper Oil 1 15
Haynes Area, Harry Russell 1 20
D. M. Hamilton, D. J. White & Co. 1 dry
Frank Fuqua, Wah-Shah-Shee Oil 3 35
W. N. Howard, D. J. White & Co. 1.. dry

Wells completed 14
Production 270
Dry 4

HANCOCK COUNTY

Pellville—J. B. McGarvin, Lowman, Daley & Co. 3 5

McLEAN COUNTY

Calhoun—G. B. McManama, The Ohio Oil 5 30
G. B. McManama, The Ohio Oil 6 .. 25
G. B. McManama, The Ohio Oil 7 .. 30
Ed Shomers, Cameron & Thompson 1 25

Wells completed 4
Production 110

HENDERSON COUNTY

Niagara—J. C. Wallace, Thos. Wittmer 3 15
C. M. Gish, Thos. Wittmer 2 40
C. M. Gish, Thos. Wittmer 3 45
C. M. Gish, Thos. Wittmer 4 35
J. C. Wallace, Thos Wittmer 2 15
G. P. Deter, Niagara Oil & Gas 3.. 35
Chas. Golday, Niagara Oil & Gas 1 .. 8
Judson Williams, Brenner & Adams 1 dry
C. M. Gish 200-a, John B. Lyddane 2 40
C. M. Gish 200-a, John B. Lyddane 3 40
C. M. Gish 200-a, John B. Lyddane 4 30
J. E. Farley, Southern Oil Prod 2.. 15
J. E. Farley, Southern Oil Prod 3.. 10
J. E. Knight, P. E. Tichenor 2..... 30
J. E. Knight, P. E. Tichenor 3 45
Lee Bushey, P. E. Tichenor 1 .... dry
J. B. Crosby, Wittmer Oil & Gas 2.. 10
J. B. Crosby, Wittmer Oil & Gas 3.. 15
J. B. Crosby, Wittmer Oil & Gas 4.. 8
J. B. Crosby, Wittmer Oil & Gas 5.. 10
Hickman Smith, H. O. Keener 1.... dry
Arch Hatchett, Welfare Oil 1 10
Arch Hatchett, Welfare Oil 2 8
Niagara School lot, O. B. Clark 1.... 40
J. E. Farley, Southern Oil Prod 4.... 15
Chas. Hester, E. W. Wilson 1..... 20
R. C. Duncan, Niagara Oil & Gas 2.. 8

Wells completed 27
Production 547
Dry 3

MUHLENBERG COUNTY

Greenville—Arch Parker, Greenville Oil Synd. 1 .... gas

WAYNE COUNTY

District 13—I. G. Guffy, Abe Denney & Co. 1 1
John Bartram, Frank & Harmon 1.. 1

Wells completed 2
Production 2

McCREARY COUNTY

District 3—Stearns Lumber & Coal, Pigeon Rock Oil 14 8
Eli Phipps, Bain & Hogue 1 6

Wells completed 2
Production 14

WOLFE COUNTY

District 20—J. P. Bush, No. 2, Amp Burnett 2 1
L. T. Girard & Co., Townsend Heirs 1 dry

Wells completed 2
Production 1
Dry 1

LAWRENCE-JOHNSON COUNTIES

District 30—Dan Davis, Noble Oil 1 4
Dan Davis, Noble Oil 2 4
Dan Davis, Noble Oil 3.... 4
S. T. Colvin, Noble Oil 1 2
S T. Colvin, Noble Oil 2 2

Wells completed 5
Production 16

JOHNSON-MAGOFFIN COUNTIES

District 27—Williams Heirs, Magoffin Oil Corp. 4 1

JACKSON COUNTY

McKee—Wolfork Land, Petroleum Exploration 4 .... dry

ROCKY MOUNTAIN AREA

COLORADO
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Boulder	0	0	0	0	0	5	5
Fremont	5	145	2	0	0	14	14
Jackson	0	0	0	0	0	5	5
Larimer	0	0	0	0	2	7	9
Las Animas	0	0	0	0	1	4	5
Moffat	1	0	1	0	10	5	16
Morgan	0	0	0	0	0	1	1
Pueblo	1	0	1	0	0	1	1
Rio Blanco	0	0	0	0	0	2	2
Routt	0	0	0	0	2	0	2
Yuma	0	0	0	0	0	2	2
Miscellaneous	0	0	0	0	1	31	32
Total Apr.	7	145	4	0	16	78	94
Total Mar.	2	0	1	1	16	77	92
Difference	5	145	3	1	0	1	1

NEW MEXICO
Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Chaves	1	0	1	0	0	1	1
De Baca	0	0	0	0	0	2	2
Eddy	4	0	2	2	4	8	12
Lea	4	211	2	1	21	16	37
McKinley	0	0	0	0	3	8	11
Rio Arriba	0	0	0	0	0	5	5
San Juan	1	0	0	1	4	8	12
San Miguel	0	0	0	0	0	5	5
Torrance	0	0	0	0	1	2	3
Miscellaneous	0	0	0	0	3	8	11
Total Apr.	10	211	5	4	36	63	99
Total Mar.	11	2,451	5	0	29	64	93
Difference	1	2,240	0	4	7	1	6

WYOMING
Summary of Field Operations

Dist. or county—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Salt Creek	0	0	0	0	1	3	4
Big Horn	0	0	0	0	0	8	8
Carbon	0	0	0	0	0	11	11
Fremont	0	0	0	0	0	5	5
Hot Springs	0	0	0	0	0	4	4
Johnson	0	0	0	0	0	4	4
Lincoln	0	0	0	0	1	6	7
Natrona (ex. Salt Creek)	2	25	0	0	2	7	9
Park	3	270	1	0	9	19	28
Sweetwater	1	0	0	1	3	12	15
Uinta	0	0	0	0	3	13	16
Sublet	1	30	0	0	2	12	14
Weston	1	0	1	0	2	7	9
Miscellaneous	0	0	0	0	2	7	9
Total Apr.	8	325	2	1	25	118	143
Total Mar.	3	1,664	0	0	23	125	148
Difference	5	1,339	2	1	2	7	5

MONTANA
Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Cat Creek	0	0	0	0	0	1	1
Kevin-Sunburst	3	305	0	0	10	13	23
Pondera	1	145	0	0	1	2	3
Miscellaneous	3	140	1	1	9	66	75
Total Apr.	7	590	1	1	20	82	102
Total Mar.	5	283	1	0	19	84	103
Difference	2	307	0	1	1	2	1

UTAH
Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Total Apr.	0	0	0	0	3	32	35
Total Mar.	0	0	0	0	3	32	35
Difference	0	0	0	0	0	0	0

COLORADO
WELLS COMPLETED

16-20-69 Cafky, Donnelly Bros. 1..... dry
1-19-70 Beltramo, Anderson Oil Co. 1. 65
3-19-70 Constantino, Anderson Oil Co. 1 5
1-19-70 Beltramo, Anderson Oil Co. 2. 75
28-20-69 Travis, Vogel-Radtdz Corp. 23 dry
7-23-67 Hedland, Beulah Dome Synd. 1 dry
2-3n-92 Williams, McLaughlin et al 1. dry

Wells completed 7
Production 145
Dry and abandoned 4

NEW MEXICO
WELLS COMPLETED

14-10-26 State, Cactus Pet. Co. 1..... dry
19-19-28 State, Flynn, Welch & Yates 57 dry
21-17-29 State, Leonard & Levers 2.... gas
28-17-30 Wooley, L. M. Lockhart et al 2 dry
5-17-28 Vandergrift, Pecos Valley Gas 5 gas
21-23-36 State, Texas Pac. C. & O. Co. 2 211
26-25-32 King, Rector Oil Co. 1..... dry
14-25-36 Lindley, Empire G. & F. 2.... gas
3-21-33 State, Cranfill & Reynolds 1-C dry
11-28-11 Garland, South. Union Gas 3.. gas

Wells completed 10
Production 211
Gas 54,000,000
Dry and abandoned 6

WYOMING
WELLS COMPLETED

11-38- 78 Smith, Wyalta Oil Co. 2..... 26
4-39- 79 Mosher & Falk 2..... 5
21-53-101 Burlington, Ohio Oil Co. 1... 70
29-52-100 Owen, Charles E. Orchard 1.. 200
6-51-100 Klindt, Vody Pet. Co. 1-B... dry
11-17-104 U. P., Ohio Oil Co. 1..... gas
12-28-114 Piney-La Barge Oil Co. 1.... 30
10-46- 64 State, Wymont P. & R. Co. 1 dry

Wells completed 8
Production 325
Gas 23,000,000
Dry and abandoned 2

MONTANA
WELLS COMPLETED

2-34-2 Shoemaker, California Co. 3.... 200
13-34-2 Moeton, A. H. Campbell 2 60
19-35-1 Bluhm, Imperial Pet. Co. 7.... 45
8-27-4 Jones, Fulton Pet. Co. 4..... 145
1-37-4 Buckley, Monalta Oil Co. 1.... 140
12-33-1 Swenson, F. & F. Oil Co. 1 .... gas
1-32-7 Federal, L. B., Square Deal Oil Co. 1 .... dry

Wells completed 7
Production 590
Dry 1
Gas 1

EASTERN FIELDS

Summary of Work Completed

Field—	Comp.	Prod.	Dry	Gas
Allegany	30	97	0	0
Bradford	243	373	0	0
Venango-Clarion	20	15	2	3
Middle Field	2	5	0	1
Butler-Armstrong	10	6	2	4
S. W. Pennsylvania	12	37	5	1
West Virginia	50	226	12	21
Southeast Ohio	54	1,631	29	33
Total April	421	2,390	50	63
Total March	369	1,971	30	43
Difference	52	419	20	20

Summary of Work Under Way

Field—	Rigs	Drlg.	Ttl.
Allegany	6	26	32
Bradford	41	119	160
Venango-Clarion	1	9	10
Middle Field	0	3	3
Butler-Armstrong	4	6	10
S. W. Pennsylvania	4	25	29
West Virginia	21	93	114
Southeast Ohio	35	81	116
Total April	112	362	474
Total March	92	312	404
Difference	20	50	70

ALLEGANY FIELD

Stewart, Sepany Oil Co..... 10
Stewart, Sepany Oil Co..... 10
Fee, Ryder & Richmond Oil Corp. (7 wells) 14
Meridan, N. V. V. Franchot mgr. trustee 6
Herrick & Shaner, N. V. V. Franchot, mgr. trustee 4
Fries, N. V. V Franchot, mgr. trustee.. 4
Fee, F. H. Stephan, mgr. trustee 2
Van Campen, J. H. Brahaney 1
Fee, Miller Bros. et al 4
Lippert, Thropp & Bucher 1
First Nat'l Bank, Shinglehouse, Curry & Burns 2
Fee, J. M. McDivitt et al 2
Fee, J. M. McDivitt et al 2
McDermott, Wilbart Oil Co. 1
Fee, L. A. Wilson et al 3
Fee, Perkins & Monroe 5
Fee, Perkins & Monroe 2
Fee, J. E. LeSuer et al 3
Fee, A. C. A. Oil Corp. 14
Fee, O. A. Eastman et al 4
Fee, C. H. Lavens et al..... 3

Wells completed 30
Production 97
Gas 3

BRADFORD FIELD

Givens, Barry estate 3
Wright, Wright et al 5
Bingham, H. E. Camp et al 2
Jack, H. F. and C. Jack..... 3
Mantz, L. F. Kinley et al 60..... 1
Bingham 371, Lane at al 64 1
Bingham 389, D. W. Daly 70 5
Bingham 388, O. L. Wann 56 4
Bingham 411, R. M. & James George 41 2
Forest Oil Corp. 1
Forest Oil Corp. 1
Forest Oil Corp. 1
Forest Petroleum Corp. 1
Forest Petroleum Corp. 1
Forest Petroleum Corp. 1
Forest Petroleum Corp. 1
Niagara Oil Corp (53 wells) 53
Quintuple, Healey Petroleum Corp. 1
Quintuple, Healey Petroleum Corp. 1
Stoddard, Minard Run Oil Co. 1
Bell, Minard Run Oil Co. 1
Bell, Minard Run Oil Co. 1
Tibbits, Minard Run Oil Co. 1
Morris, H. L. Morris 1
DeGoller, E. J. DeGoller 1
Bingham 377, South Penn Oil Co..... 2
Rew & Hodge, South Penn Oil Co. 3
Fee, Lincoln & Brink 1
Newell, Hazlewood Oil Co. 2
Haven, Pringle & Korner 5
Quintuple Oil Co., W. M. Howard 1
Hamlin, Minard Run Oil Co. 3
Morris, Morris & Morris 1
Farm 4,185, South Penn Oil Co. 2
Farm 4,190, South Penn Oil Co. 2
Lawton, Niagara Oil Corp. No. 2 24
Lawton, Niagara Oil Corp. (29 oil wells) 29
Burdick, South Penn Oil Co. 2
Rounds, South Penn Oil Co. 4
Burdick, South Penn Oil Co. 3
Lee, Hallock & Weston, South Penn Oil Co. 3
Weston, Jr., Bradford Producing Co. .. 1
Weston, Jr., Bradford Producing Co. .. 1
Schenfield, Kinley Oil Co. 2
Hamlin & Smith, South Penn Oil Co. .. 3
Sikes, Letson & Smith 1
Fee, M. C. Reidy 4
Franchot, J. Jackson 5
Kinley Oil Co., Pure Penn Oil Co. 2
Fee, Healey Petroleum Corp. 5
Taylor, South Penn Oil Co. 1
Wheeler & Hawkins, South Penn Oil 1
Wheeler & Hawkins, South Penn Oil 1
Blair, Davis & King, South Penn Oil 5
Blair, Davis & King, South Penn Oil 5
Blair, Davis & King, South Penn Oil 5
Blair, Davis & King, South Penn Oil 5
Blair, Davis & King, South Penn Oil 5
Havens, South Penn Oil Co. 1
Quintuple, Irene D. Miller et al 1
Fee, Moses Sullivan 1
Kinley, W. E. & T. E. Burdick 4
Fee, E. M. Park estate 20
Fee, E. M. Park estate 10
Fee, T. H. Given 10
Fee, Melvin & Towne 5
Bingham 400-A, South Penn Oil Co. .. 2
Fee, Hilliard & Dodge 3
Northwestern Mining, South Penn Oil Co. 3
Kinzua fee, South Penn Oil 4
Kinzua fee, South Penn Oil 15
Fee, Hazelwood Oil Co. 1
Bingham 190, South Penn Oil Co. 2
Tract 1, Hazelwood Oil Co. 2
Tract 1, Hazelwood Oil Co. 2
Kinley Oil Co., H. J. Walter 1
Fee, N. D. Gibson et al 2
Whipple, South Penn Oil Co. 1
Melvin, South Penn Oil 1
Melvin, South Penn Oil 1
Melvin, South Penn Oil 1
Melvin, South Penn Oil 1
Dean, Walker Bros. et al 3
Bingham 408, South Penn Oil Co. 2
Bingham 554, South Penn Oil Co. 5
Bingham, Satt. South Penn Oil Co. 2
Bingham 577, Alma B. Collins 3
Bingham 581, Associated Producers Co. 1
Jones, South Penn Oil Co. 6
Borden, W. T. Piper 2
Borden, W. T. Piper 2
Borden, T. P. Thompson, Jr. 2
Mitchell, Bradford Producing Co., Inc. 2
Barry, T. H. Kervin, Jr. 1
Gibson, Simpson-Cooper .... pres.
Willetts, J. W. Looker 3
Booth, R. E. Porter .... pres.
Bingham, South Penn Oil Co. 3
Bingham 553, South Penn Oil Co. 9
Bingham 538, Alma B. Collins..... pres.

Wells completed 243
Production 373
Pressure 66

CLARION—VENANGO

Simcox, S. Y. Ramage 69 1
McMullen, B. Turner & Sons 10 1
Hill, Sandy Creek Oil & Gas Co. .... gas
VanCamp, Shaffer Oil Co. 4 1
Nicklin, C. F. Hitchcock 47 1
Beck, United Natural Gas Co. 3931.... gas
Bush, Fryburg Motor Co. 9 .... gas
Berlin, F. C. Deemer 2 1
Meherten et al, F. C. Deemer 22..... 1
Meherton et al, F. C. Deemer 23..... 1
Meherten et al, F. C. Deemer 24 1
Gilbert, Alum Rock Gas Co. 1 1
Gillingham, John L. Gillingham 3..... 1
Weaver, M. L. Weaver et al 1 .... dry
Deitrich, Hess & Wood 3 1
Deitrich, Hess & Wood 4..... 1
Whitling, Hogback Oil & Gas Co. 2.... 1
Stewart, Ford & Stewart 1..... dry
Millis, A. R. & George A. Long 21 1
Millis, A. R. & George A. Long 22..... 1

Wells completed 20
Production 15
Gas 3
Dry 2

MIDDLE FIELD

Jamieson, Allegheny Gas Co. .... gas
Duke, Penn Petroleum Co. 5

Wells completed 2
Production 5
Gas 1

BUTLER-ARMSTRONG

Crawford & Gregory, same 1..... 1
Gettman, Reynolds .... gas
Cunningham, Saxonburg, L. & H. Co. 1 dry
Alderson, Saxonburg, L. & H. Co. .... gas
Graff, Graff Brothers 1 .... gas
Weiland, Weiland Eythe et al 2 .... gas
Robinson, J. R. & C. S. Robinson 4.... 1
McKinney, Edward McKinney 11 2
Day, T. C. Burns 2 .... dry
Shanor, Willis M. Ruby et al 21 2

Wells completed 10
Production 6
Gas 4
Dry 2

SOUTHWEST PENNSYLVANIA
WELLS COMPLETED

McPeak Hrs., Dallmyer & Co. 1..... dry
Taylor, Carnegie Gas Co. 2..... 20
Bedillion, E. H. Tague 1..... 5
Van Kirk Hrs., Mfrs. L. & H. Co. 1.... dry

ALLEGHENY COUNTY

Edgewater Steel Co., Edgewater Steel Co. 4 .... dry
Arbuckle, Monier & Co. 1..... gas
Neely, Shuck & Co. 1..... 3

BEAVER COUNTY

Ferguson, Freshwater Co. 1..... dry

GREENE COUNTY

Smith, Greensboro Gas Co. 1..... dry
Vance, Greensboro Gas Co. 1..... 3
Lemley, So. P. O. Co. 1..... 4

Wells completed 12
Production 37
Dry 5
Gas 1

SOUTHEAST OHIO
WELLS COMPLETED
MONROE COUNTY

Burkholter, W. O. & G. P. Co. 1..... dry

PERRY COUNTY

Donhour, Kessling Drilling Co. 1..... dry
Moore, Ohio F. G. Co. 2..... 90

HOCKING COUNTY

Sunday C'k C. Co., Preston Oil Co. 1378 dry
Sunday C'k C. Co., Preston Oil Co. 1388 60

MUSKINGUM COUNTY

Harris, Ohio Fuel Gas Co. 1..... gas
Treaha, Wittmer O. & G. P. Co. 1..... dry
Dailey, Wittmer O. & G. P. Co. 1..... dry
Wilson, Pure Oil Co. 2..... dry
McCoy, Crowley, Carr & Co. 2..... 300
Frah, Crowley, Carr & Co. 2..... gas
Ramsbottom, Cline & Co. 1..... 75
Early, Walsmith & Webb 1..... gas
LaFollette, Ralph Bros., Inc. 1..... gas
Garrett, Buckeye Supply Co. 1..... 40
State of Ohio Brick, Mauler & Co. 1.... 90
State of Ohio Brick, Mauler & Co. 2.... 100
Hocking Coal Co., Kachelmacher Est. 1 200
Hocking Coal Co., Kachelmacher 2..... 120
Brown, S. & W. O. & G. Co. 1..... gas
Swingle, Fritz Oil Co., 1..... gas
Wilking, Hope C. & R. Co. 1..... 60

HOLMES COUNTY

Busy, East Ohio Gas Co. 1..... gas
Smith, Great Lakes Oil Co. 1..... 10
Smith, Great Lakes Oil Co. 5..... gas

GUERNSEY COUNTY

Umstatt, Ohio Fuel Gas Co. 1..... dry
Alloway, Ohio Fuel Gas Co. 3..... dry
Quillin, East Ohio P. & R. Co. 5..... 20
Gray, East Ohio P. & R. Co. 3..... 40
Frauler, Kemrow Co. 1..... 60

COSHOCTON COUNTY

Stockum, Bell Bros. 1..... 2
Reiss, Ohio Fuel Gas Co. 1..... gas

LICKING COUNTY
Chaney, Kuntz & Co. 12 ... 8
Recton, Hope C. & R. Co. 6 ... dry
Gruber & Co., Preston Oil Co. 2 ... 130
Van Winkle, McClay & Co. 1 ... 150
Warfle, Hope C. & R. Co. 1 ... 5

NOBLE COUNTY
Brtan, Clark & Co. 2 ... dry
Crum, King & Co. 6 ... 20
Davis, Ohio Fuel Gas Co. 1 ... 3
Reed, Local Company 1 ... gas
Hupp, Nau & Co. 2 ... 1

FAIRFIELD COUNTY
Williamson, Murl Myers 1 ... 2

MORGAN COUNTY
Gifford, W. S. Harris 1 ... 5
Zumbro, Ohio Fuel Supply Co. 1 ... gas

ATHENS COUNTY
Drayer, I. C. Robinson 1 ... gas
O'Neal, Wiser Oil Co. 1 ... dry
Penrod, Townsend O. & G. Co. 11 ... gas

MEIGS COUNTY
Carnahan, Twenty-Five Assn. 15 ... 5
Beegle, Koontz & Co. 1 ... 1
Arnett, Delbert, Bachelor & Co. 1 ... dry

WASHINGTON COUNTY
Knowlton, Graham & Co. 1 ... 1
Lorntz, Lorptz Oil Co. 1 ... 1

JEFFERSON COUNTY
Infirmary, Branen & Co. 8 ... 20
Baker, A. F. Baker, trustee 4 ... 2

Wells completed ... 50
Production ... 1631
Dry ... 12
Gas ... 11

WEST VIRGINIA

WELLS COMPLETED
HARRISON COUNTY
Burnside, Reserve Gas Co. 1 ... 2

MARION COUNTY
Lucas Bros., Phila. Gas Co. 4984 ... dry
Yount, Mfrs. L. & H. Co. 1 ... gas

MONONGALIA COUNTY
Fox, Eddy & Co. 1 ... gas

WETZEL AND TAYLOR COUNTIES
Troy, Troy O. & G. Co. 1 ... 3
Hoge Hrs., Cochran & Cochran 1 ... gas

MARSHALL COUNTY
Clark, Marshall-Preston Oil Co. 1 ... gas
Hinkle, Marshall-Preston Oil Co. 2 ... gas
Howard Hrs., Mfrs. L. & H. Co. 1 ... gas

DODDRIDGE COUNTY
McCullough, Choguill & Ray 7 ... dry
Dotson, J. D. Foley 1 ... 5

RITCHIE COUNTY
McFarlan, Hope C. & R. Co. 1 ... dry
McGinnis, Warrior Oil Co. 6 ... dry

GILMER COUNTY
Stealey, Giles O. & G. Co. 1 ... dry

CLAY COUNTY
Parker, So. P. O. Co. 8 ... 10
B. S. & G., W. Va. G. & O. Co. 2 ... 40
Summers, W. Va. G. & O. Co. 9 ... 25
Stockly, So. P. O. Co. 106 ... 15

WIRT COUNTY
King, R. C. Woggner 1 ... gas
Vernon-Donoho, W. C. Patterson 35 ... dry

WOOD COUNTY
McAtee, Charles S. Smith 3 ... 4
Athey, Stewart & Athey 4 ... dry

PLEASANTS COUNTY
Williamson, Albert Neely & Co. 1 ... dry
Shingleton, H. L. Schultz 1 ... dry

ROANE COUNTY
O'Hara Est., Lrster & Co. 1 ... dry
Enoch Hrs., Heck Oil Co. 7 ... 20
Watkins, Heck Oil Co. 1 ... 25
Kincaide, Heck Oil Co. 2 ... 5
Vandal, Hope C. & R. Co. 1 ... 2
H. F. Enoch, Hope C. & R. Co. 4 ... 40
Ferrell, Fred Knapp 2 ... gas

CALHOUN COUNTY
Proudfoot, V. G. G. & O. Co. 4 ... 5
Stump, Hope Gas Co. 1 ... gas
Yoak, Chemical Oil Co. 2 ... 5
Riddle, A. H. Jackson 1 ... gas
Nichols Hrs., Morris & Co. 1 ... gas

LINCOLN COUNTY
Lambert, Woodall & Co. 1 ... gas
Stowers, Woodall & Co. 1 ... gas
Tutor, Pridemore & Adkins 2 ... gas

BOONE COUNTY
L. R. & P. tract, Pure Oil Co. 35 ... 15
L. R. & P. tract A, Pure Oil Co. 39 ... 5
Y. O. & Coal Co., G. L. Cabot 36 ... gas
Sunday C'k C. Co., U. F. G. Co 4055 ... gas
Safe D. P. T. Co., Owens B. & M. Co. 9 ... dry
Cunningham, Owens B. & M. Co. 19 ... dry
Price Sr., Martha O. & G. Co. 1 ... gas
Warner, Hope Gas Co. 7432 ... gas
Banks, Means & Banks 1 ... gas

WAYNE COUNTY
Wilson, Wayne U. F. & G. Co. 23 ... dry
Saylers, Chartiers Oil Co. 1 ... gas

Wells completed ... 50
Production ... 226
Dry ... 12
Gas ... 21

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Ashland	10	31	3	4	10	12	22
Medina	4	0	1	3	0	6	6
Lorain	2	0	2	0	6	8	14
Wayne	3	0	1	2	4	7	11
Holmes	1	0	0	1	2	9	11
Cuyahoga	3	17	0	0	2	1	3
Ashtabula	1	0	0	1	0	3	3
Richland	1	0	1	0	0	4	4
Knox	4	25	0	3	5	10	15
Coshocton	2	0	0	2	3	2	5
Summitt	6	0	0	6	3	15	18
Licking	8	312	1	2	4	14	18
Muskingum	18	968	4	2	11	25	36
Athens	12	5	3	8	7	11	18
Meigs	4	5	2	1	15	19	34
Jackson	0	0	0	0	6	7	13
Vinton	0	0	0	0	5	5	10
Lawrence	0	0	0	0	0	4	4
Morrow	1	0	1	0	0	0	0
Tuscarawas	3	160	1	1	4	9	13
Stark	4	0	0	4	1	6	7
Fairfield	2	0	2	0	0	1	1
Guernsey	5	140	3	0	4	8	12
Belmont	2	0	1	1	3	3	6
Gallia	0	0	0	0	0	1	1
Total Apr.	96	1,663	26	41	95	190	285
Total Mar.	80	1,317	19	33	83	185	268
Difference	16	346	7	8	12	5	17

WELLS COMPLETED
ASHLAND COUNTY
Greene—E. N. Weltner, Ohio Fuel Gas 1-4,987 ... gas
Jackson—Sadie Stephenson, Ohio Fuel Gas 1-5,023 ... gas
Orange—F. M. Lovering, Ohio Fuel Gas 1-5,044 ... gas
Sullivan—J. T. Smith, Ohio Fuel Gas Co. 1-5,046 ... dry
Montgomery—J. O. Latter, The Kemrow Co. 1 ... gas
Perry—M. Wheeler, Crownshield & Co 4 ... dry
F. P. Myers, Stewart & Co. 2 ... 8
Lake—J. P. Smith, Robinson & Co. 4 ... 20
John P. Smith, Robinson & Co. 5 ... 3
Vermillion—Emma Jarvis, Robinson & Co. 2 ... dry

Wells completed ... 10
Production ... 31
Dry ... 3
Gas ... 4

MEDINA COUNTY
Lafayette—Delno Marquette, Ohio Fuel Gas 1-4,995 ... gas
W. A. & A. J. White, Barnhart & Co. 1 ... dry
Harrisville—H. V. Bensinger, Ohio Fuel Gas 1-5,002 ... gas
W. W. Kindig, Ohio Fuel Gas 1-5,021 ... gas

Wells completed ... 4
Dry ... 1
Gas ... 3

LORAIN COUNTY
Carlisle—Carl Diedrick, Ohio Fuel Gas 1-5,042 ... dry
Ridgeville—E. P. Wilhelmy, Ohio Fuel Gas 1-5,034 ... dry

Wells completed ... 2
Dry ... 2

WAYNE COUNTY
Chester—Garver Heirs, Harmon & George 1 ... gas
W. A. Firestone, Hulse & Kundtz 1 .. gas
J. Burch Wile, Harmon & George 1 .. dry

Wells completed ... 3
Dry ... 1
Gas ... 2

HOLMES COUNTY
Richland—B. E. Bucy, East Ohio Gas 1 gas
CUYAHOGA COUNTY
Olmstead—Merkle, North Olmstead Bank 1 ... 5
Merkle, North Olmstead Bank 2 4
Merkle, North Olmstead Bank 3 8

Wells completed ... 3
Production ... 17

ASHTABULA COUNTY
Sheffield—Geo. W. Kelsey, Ohio Fuel Gas 1-4,977 ... gas

RICHLAND COUNTY
Worthington—John M. Hay, Ohio Fuel Gas 1-4,893 ... dry

KNOX COUNTY
Brown—John R. Koppert, Ohio Fuel Gas 5-5,035 ... gas
Ray R. Koppert, Ohio Fuel Gas 6-5,036 gas
Rebecca J. Kunkle, Upham Gas 9 .. gas
Union—W. D. Heaton, The Pure Oil 5 25

Wells completed ... 4
Production ... 25
Gas ... 3

COSHOCTON COUNTY
Franklin—A. A. Phillips, Ohio Fuel Gas 1-4,985 ... gas
Monroe—L. P. Reiss, Ohio Fuel Gas 1-5,025 ... gas

Wells completed ... 2
Gas ... 2

SUMMITT COUNTY
Franklin—E. A. Fairchild, F. A. Brendall & Co. 1 ... gas
Catherine Messner, Cameron & Co. 1.. gas
Greene—Ada Lighton, East Ohio Gas 1 gas
G. W. Crouse 6 ... gas
W. H. Humbert, F. A. Brendall & Co. 1 ... gas
Alice Wise, Arthur & Reeves 1 .... gas

Wells completed ... 6
Gas ... 6

LICKING COUNTY
Fallsburg—Amos Van Winkle, Wittmer Properties, Trus. 1 ... 150
Wallace Davidson, Ohio Fuel Gas 1-5,062 ... 130
John Chaney, Hulse & Kundtz 12 ... 10
Perry—Nellie Smith, Settles Oil 5 ... 12
Sarah Rector, Hope Construction & Refg. 6 ... 10
J. C. Wright, Hope Construction & Refg. 5 ... gas
Sarah Rector, Hope Construction & Refg. 5 ... dry
E. Hoover, McClay Bros. 4 ... gas

Wells completed ... 8
Production ... 312
Dry ... 1
Gas ... 2

MUSKINGUM COUNTY
Washington—Ralph M. Hanes, Ohio Fuel Gas 1-5,016 ... dry
Hopewell—G. W. Wilking, Hope Construction & Refg. 1 ... 4
Clay—Thos. Forgrave, Abe Snider & Co. 1 ... 40
State Brick Plant, Noah Andrews & Co. 2 ... 100
State of Ohio, Noah Andrews & Co. 1 90
Nelson McCoy & Co., Crawley & Carr 2 ... 300
Elk Coal, Kachelmacher Estate 1 ... 90
Elk Coal, Kachelmacher Estate 2 81
E. H. Norman, John Wallsmith 2 10
Jenkins & Fleming, Henry Scholl & Co. 1 ... 36
Ramsbottom, Wm. Kline & Co. 5 160
August Cherry, Crawley & Carr 1 .. gas
Jackson—Jasper Ashcraft, the Pure Oil 2 ... 52
B. O. Horton, Hope Construction & Refg. 1 ... 5
Perry—Thos. Treahey & Co., Wittmer Properties, trustee 1 ... dry
Wilmer A. Dailey, Wittmer Properties, trustee 1 ... dry
Union—J. C. Wilson & Co., Penn Ohio Oil 1 ... dry
Brush Creek—H. T. Swagle, Fritz Oil & Gas 1 ... gas

Wells completed ... 18
Production ... 968
Dry ... 4
Gas ... 2

ATHENS COUNTY
Ames—F. J. Beasley, Ohio Fuel Gas 3-5,014 ... dry
Emma E. Wyatt, Ohio Fuel Gas 2-5,000 ... gas
Robt. Bean, Fox & Mosure 7 .... .. dry
Robt. Bean, Fox & Mosure 8 ... 5
Berne—C. O. Grimes, Ohio Fuel Gas 1-5,028 ... gas
Lodi—G. C. Webb, Ohio Fuel Gas 1-4,-914 ... gas
Sam Jeiers, Fairfield Oil 1 ... gas
Carthage—Ben Barnhart, Ohio Fuel Gas 2-5,066 ... gas
Alexander—Isaac Castle, Townsend Oil & Gas 10, 11 ... gas
Chas. V. O'Neil, Wiser Oil 1 ... dry
E. C. Russ, Park Bowser Co. 1 .... gas

Wells completed ... 12
Production ... 5
Dry ... 3
Gas ... 8

MEIGS COUNTY
Sutton—Wm. Carnahan, Tyree & Co. 15 5
Arthur Beagle, Koontz & Strohman 1 dry
Rutland—J. W. Carr, Ohio Fuel Gas 1-4,991 ... gas
Scipo—Geo. W. Clark, Ohio Fuel Gas 1-5,054 ... dry

Wells completed ... 4
Production ... 5
Dry ... 2
Gas ... 1

MORROW COUNTY
Westfield—Chas. Weist, Lee Oil & Gas 1 ... dry

TUSCARAWAS COUNTY
Oxford—Quillan-Caldwell, Traders Oil & Gas 1 ... gas
Phil Lamneck, Gordon-Hopewell Oil & Gas 1 ... dry
Washington—Little-Paulson, Capital Drilling 2 ... 160

Wells completed ... 3
Production ... 160
Dry ... 1
Gas ... 1

STARK COUNTY
Lawrence—Lewis Slick, Johnson & Co. 1 ... gas
Adam Limbach, Penn Oil & Gas 2, 3 gas
John Neidert, F. A. Brendall & Co. 2 gas

Wells completed ... 4
Gas ... 4

FAIRFIELD COUNTY
Rush Creek—S. M. Williamson, Merle Meyers & Co. 1 ... dry
Pleasants—Henry Hartman, City Natural Gas Works 3 ... dry

Wells completed ... 2
Dry ... 2

GUERNSEY COUNTY
Wheeling—J. H. Fowler, The Kemrow Co. 1 ... 100
Chas. & A. Gray, East Ohio Gas 8 .. 40
W. J. Alloway, Ohio Fuel Gas, 3-5,012 dry
Simon Umstott, Ohio Fuel Gas 2-5,040 dry
Adams—J. R. McNerny, Geo. McLaughlin & Co. 1 ... dry

Wells completed ... 5
Production ... 140
Dry ... 3

BELMONT COUNTY
Somerset—Ed Miller, Shay McMullen 1 gas
Richland—C. Hendershot, Norwood P. Johnson 1 ... dry

Wells completed ... 2
Dry ... 1
Gas ... 1

ILLINOIS FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Crawford	8	6	5	0	1	2	3
Lawrence	2	0	2	0	0	3	3
Wabash	3	35	0	1	0	6	5
Clinton	1	0	1	0	0	1	1
Effingham	0	0	0	0	0	1	1
Randolph	0	0	0	0	0	2	2
Madison	0	0	0	0	0	2	2
Monroe	1	0	1	0	0	2	2
Edgar	0	0	0	0	0	1	1
Washington	0	0	0	0	0	1	1
St. Clair	3	70	2	0	0	14	14
Total Apr.	18	111	11	1	1	34	35
Total Mar.	21	403	11	1	2	35	37
Difference	3	292	0	0	1	1	2

WELLS COMPLETED
CRAWFORD COUNTY
Honey Creek—A. Carter, Montgomery, Weber & Co. 1 ... dry
Oblong—Jas. Murphy, W. C. Kennedy Co. 9 ... 3
Montgomery—Wm. Conrad, Mattox & McColpin 1 ... 2
Prairie—J. Akeman, Portersville Oil 2.. 1
J. W. Bline, M. Watson & Co. 1.... dry
Noah Gray, O. R. Oil & Gas 2 ..... dry
M. Williams, O. R. Oil & Gas 1 .... dry
Licking—John Calvert, Mark U. Weber 1 dry

Wells completed ... 8
Production ... 6
Dry ... 5

LAWRENCE COUNTY
Dennison—J. W. Clark, No. 2, The Ohio Oil 15 ... dry
Lyman Brooks, H. Risley & Co. 1.... dry

Wells completed ... 2
Dry ... 2

WABASH COUNTY
Wabash—Hattie E. Robinson, Robinson Oil 1 ... 10
A. Schaffer, Robinson Oil 1 ... 25
Holson-Dorney, Max Oil 10 ... gas
Della V. Wright, Arkansas Fuel Oil 8, 9 ... abd

Wells completed ... 3
Production ... 35
Gas ... 1
Abandoned ... 2

CLINTON COUNTY
Breese—E. Hortmeyer, Goldsmith, Taylor & Co. 1 ... dry
MONROE COUNTY
Waterloo—Barthel Schlegel, A. R. A. Prod. 1 ... dry
ST. CLAIR COUNTY
Sugar Loaf—Hi Julius, Trenton Rock Oil & Gas 1 ... dry
Geo. House, Lupo Oil Investment 1.. dry
Wm. Breuer, Sugar Loaf Oil 5 70
A. D. Harlow, Clyde V. Sparks & Co. 1 ... abd
Hamil-Batcheior, Moody & Segraves 1, 2 ... abd
H. E. McDaniel, Majestic Oil & Gas 2 abd

Wells completed ... 3
Production ... 70
Dry ... 2
Abandoned ... 4

LIMA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Wood	2	11	0	0	0	1	1
Hancock	0	0	0	0	0	4	4
Allen	1	15	0	0	1	1	2
Auglaize	0	0	0	0	0	2	2
Mercer	0	0	0	0	0	3	3
Sandusky	3	5	0	1	0	1	1
Seneca	4	16	1	0	1	8	9
Ottawa	0	0	0	0	0	1	1
Shelby	1	20	0	0	0	1	1
Crawford	0	0	0	0	0	1	1
Logan	0	0	0	0	0	1	1
Hardin	1	1	0	0	0	2	2
Wyandot	0	0	0	0	0	1	1
Total Apr.	12	68	1	1	2	27	29
Total Mar.	17	236	4	1	2	30	32
Difference	5	168	3	0	0	3	3

WELLS COMPLETED
WOOD COUNTY
Montgomery—Crossman, D. J. Klingman 4 ... abd
North Ohio Oil, C. H. Knisely, 1, 2, 3, 4, 5 ... abd
J. J. Ames, Noonemaker & Co. 1, 2, 3, 5, 7 ... abd
Mary Richards, The Ohio Oil 3 ... abd
Crowfoot & Romler, The Ohio Oil 9.. abd
Andrew Deiter, The Ohio Oil 3 .... abd
Freedom—H. & J. C. Bruning, The Ohio Oil 19 ... abd
Henry Diehl, The Ohio Oil 12 ..... abd
F. H. Hoodlebrink, The Ohio Oil 11.. abd
Henry Schwaise, August Bushman & Co. 1, 2 ... abd
Henry—M. Auverter, The Ohio Oil 19.. abd
Liberty—J. W. Powell, The Ohio Oil 2, 6, 9, 11, 14 ... abd
Plain—J. P. Woodbury, Plain Oil & Gas 1 ... 5
Bloom—Frank McClure, Clark A. Browning 36 ... 6

Wells completed ... 2
Production ... 11
Abandoned ... 25

HANCOCK COUNTY
Portage—C. A. Cole, Povenmire & Benson 1, 2, 3, 4, 5, 6, 7, 8, 9..... abd
E. J. Cole, Povenmire & Benson 1, 2, 4, 5, 6, 7, 8, 9 ... abd

Abandoned ... 17

ALLEN COUNTY
Bath—C. A. Hoover, C. A. & F. J. Peavey 3 ... 15
Marion—Chas. Greming, The Ohio Oil 1, 2, 3, 4, 5, 6, 7, 8, 9..... abd

Wells completed ... 1
Production ... 15
Abandoned ... 9

SANDUSKY COUNTY
Washington—Emery Hetrick, Gibsonburg Oil 1 ... 2
North Washington—O. Sorg, Trenton Oil 1 ... 3
Sandusky—C. F. Michaels, F. F. OBrien 1 ... gas
Madison—C. Beeker, E. S. Johnston 3.. abd
T. Taylor, E. S. Johnston 1, 2..... abd
Scott—Allen Winchell, Chas. W. Putman 13 ... abd

Wells completed ... 3
Production ... 5
Gas ... 1
Abandoned ... 4

SENECA COUNTY

Liberty—Ida M. Rosenberger, C. L. Messer & Co. 1 ..... dry
O. & C. Ewalt, Fossum & Co. 1 1
Jackson—C. P. Dillon, Ohio-Kansas Oil & Gas 3 10
Waltermier, Irvin Waltermier 8 5
Elmer Kissling, Onsel Bros. 3 ..... abd
Lang & Dicker, Onsel Bros. 16, 17.. abd
Priscilla Dicken, Onsel Bros. 13 .. abd
Clinton—F. L. Bork, J. H. Murphy & Son 1, 2, 3 ..... abd

Wells completed 4
Production 16
Dry 1
Abandoned 7

SHELBY COUNTY

Cynthian—Geo. Threibess, Ellerman Oil 1 20

HARDIN COUNTY

McDonald—Erwin Hites, Roundhead Oil & Gas 8 1

MICHIGAN FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Muskegon ..	3	85	0	1	4	7	11
Isabella	17	1,802	5	0	18	37	55
Midland ...	0	0	0	0	3	9	12
Kent	1	0	1	0	1	2	3
Ottawa	1	0	1	0	0	2	2
Oceana	1	0	1	0	1	6	7
Mason	1	0	0	1	0	4	4
Manistee ...	0	0	0	0	1	2	3
Lake	0	0	0	0	0	4	4
Newaygo ...	0	0	0	0	2	9	11
Cass	4	15	3	0	1	1	2
Tuscola	0	0	0	0	0	1	1
Clare	1	0	1	0	3	4	7
Montcalm ...	1	0	1	0	1	0	1
Alpena	0	0	0	0	0	1	1
Saginaw	1	12	0	0	0	2	2
Emmett	0	0	0	0	0	1	1
Delta	0	0	0	0	0	1	1
Kalkaska ..	1	0	1	0	1	1	2
Branch	0	0	0	0	0	1	1
Berrien	0	0	0	0	0	1	1
Iosco	0	0	0	0	0	2	2
Missaukee ..	0	0	0	0	1	0	1
Eaton	0	0	0	0	1	1	2
Montmorency	0	0	0	0	1	0	1
Jackson	0	0	0	0	1	0	1
Kalamazoo ..	0	0	0	0	0	1	1
Presque Isle .	0	0	0	0	1	0	1
Sanilac	0	0	0	0	1	0	1
Monroe ...	0	0	0	0	1	0	1
Allegan	1	0	1	0	3	2	5
Calhoun	0	0	0	0	1	0	1
Van Buren ..	0	0	0	0	0	1	1
Washtenaw .	0	0	0	0	0	1	1
Cheboygan .	0	0	0	0	1	0	1
Ingham	0	0	0	0	1	0	1
Gratiot	2	250	1	0	3	7	10
Total Apr.	35	2,164	16	2	54	109	163
Total Mar.	16	1,770	2	0	53	108	161
Difference	19	394	14	2	1	1	2

WELLS COMPLETED

MUSKEGON COUNTY

Muskegon—Jos. DeVries, Lake Shore Petroleum 1 ..... gas
C. E. Gilbert, Swastika Oil & Gas B-1 50
Chas. Orr, Grand Rapids Oil 1 35
North Muskegon Dev., Diamond Oil & Gas 1 ..... abd
Laketon—A. L. Young, Mrs. C. G. Marsh, trustee 1 ..... abd

Wells completed 3
Production 85
Dry 1
Abandoned 2

ISABELLA COUNTY

Chippewa—Reems, The Pure Oil B-5.. 150
State-Isabella, The Pure Oil A-4.... 100
State-Isabella, The Pure Oil B-4 500
J. Fox, The Pure Oil 8 140
John R. Veit, The Pure Oil 1 50
John R. Veit, The Pure Oil 2 82
Gibbs-Gordon, The Pure Oil A-1 50
Gibbs-Gordon, The Pure Oil Co. 2 100
Dusenbery, The Pure Oil Co. 1 ..... dry
Joslyn, Chippewa Oil & Gas 9 300
J. Coon, Stork Oil 6 200
Ayres, Leonard Oil & Gas 2 40
Isabella—J. Rader, Holsinger-Jordan 1 dry
Bullard-Johnson, Duryee & Ballard 1 dry
Zingery, H. E. Pollock 1 ..... dry
Lincoln—John Rothlisburg, West Virginia Prod. Co. 1 ..... dry
Vernon—Anna Bowman, Mellon, Pollock & Whitmer 1 90

Wells completed 17
Production 1802

KENT COUNTY

Caledonia—Schondelmeyer, Lang & Shriver 1 ..... dry

OTTAWA COUNTY

Chester—C. E. Moe, Michigan Pet. 1.. dry

OCEANA COUNTY

Colfax—J. Vanderwall, Oceana Oil Corp. 1 ..... dry

MASON COUNTY

Grant—Lee A. Lewis, Diamond-Thompson Synd. 1 ..... gas

CASS COUNTY

Porter—Chas. Stuttman, Blair & Miller 1 ..... dry
Chas. Stuttman, Blair & Miller 2.... 15
Chas. Clute, C. A. Daniels 1 ..... dry
Howard—Frantz, Berring Petroleum Synd. 1 ..... dry

Wells completed 4
Production 15
Dry 3

CLARE COUNTY

Grant—McKay, Mercier & McKay 2.... dry

MONTCALM COUNTY

Richland—J. Nobles, Hill Top Oil & Gas 1 ..... dry

SAGINAW COUNTY

Saginaw—Geo. Bruner, Saginaw Prospecting 76 12

KALKASKA COUNTY

Clearwater—State lease, Muskegon Oil Corp. 2 ..... dry

ALLEGAN COUNTY

Hopkins—Oliver W. Gere, National Pet. Corp. 1 ..... dry

GRATIOT COUNTY

Seville—Nelson, The Sun Oil Co. 1.... 250
Washington—A. Hass, E. Q. Pequignot 1 ..... dry

Wells completed 2
Production 250
Dry 1

INDIANA FIELDS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Adams	1	0	1	0	0	0	0
Gibson	2	8	0	1	0	7	7
Pike	1	34	0	0	0	8	8
Daviess	0	0	0	0	0	1	1
Sullivan	0	0	0	0	0	3	3
Vigo	2	175	0	0	0	6	6
Spencer	3	35	2	0	0	5	5
Perry	1	0	1	0	0	5	5
Warrick ...	0	0	0	0	0	2	2
Crawford ..	0	0	0	0	0	2	2
Lagrange ..	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	1	1
Posey	0	0	0	0	0	2	2
Putnam	0	0	0	0	0	1	1
Morgan	0	0	0	0	0	1	1
Marshall ...	0	0	0	0	1	1	2
Monroe	1	0	1	0	1	1	2
Lake	0	0	0	0	0	1	1
White	0	0	0	0	0	1	1
Harrison ...	0	0	0	0	0	1	1
Dubois	0	0	0	0	1	0	1
Total Apr.	11	252	5	1	3	50	53
Total Mar.	16	461	3	5	6	36	42
Difference	5	209	2	4	3	14	11

WELLS COMPLETED

ADAMS COUNTY

Jefferson—Mrs. S. S. Egley, G. S. Lacknett 1 ..... dry

JAY COUNTY

Bear Creek—T. W. Shimp, Spencer & Pontius 2, 8 ..... abd
Wm. Michaels, Spencer & Pontius 5, 6, 7 ..... abd
J. W. Roseborough, Spencer & Pontius 16 ..... abd
E. T. Heffner, Spencer & Pontius 1, 2, 5 ..... abd

Abandoned 9

GRANT COUNTY

Jefferson—A. & E. Anderson, Jacob Wides 4, 5, 6, 7, 8, 9, 10, 11, 12 .. abd

Abandoned 9

GIBSON COUNTY

Center—Sam Mitchell, Texana Oil 3.. gas
Washington—Byron Preston, L. N. Savage & Co. 2 8
W. C. Deffendall, The Ohio Oil 4.... abd

Wells completed 2
Production 8
Gas 1
Abandoned 1

PIKE COUNTY

Clay—W. H. Lindy, F. B. Hillis & Co. 4 34
Della Kime, Chas. C. Taliaferro Jr. 1 abd

Wells completed 1
Production 34
Abandoned 1

DAVIESS COUNTY

Veale—J. N. Peak, L. T. Gee & Co. 1.. abd

VIGO COUNTY

Prairie Creek—Wm. Riggs No. 2, Siosi Oil Corp. 17..... 150
Wm. Riggs, No. 1, Siosi Oil Corp 8.. 25

Wells completed 2
Production 175

SPENCER COUNTY

Huff—Arthur Ray, Packard Oil 6 .... dry
Arthur Ray, Daugherty & Co. 2.... dry
Arthur Ray, Daugherty & Co. 3 35

Wells completed 3
Production 35
Dry 2

PERRY COUNTY

Clark—J. C. Harbaville, The Ohio Oil 1 dry

MONROE COUNTY

Polk—F. & L. Deckard, Petroleum Exploration Co. 1 ..... dry

GEOPHYSICAL LICENSES

WASHINGTON, D. C., May 12.—All oil companies using geophysical methods in exploratory projects should bear in mind that radio station license renewals must be filed with the Radio Commission in Washington, D. C., one month prior to the expiration date of the license. Quite a few company licenses are near expiration and unless attention is given to this warning delays in obtaining renewals will be inevitable.

BRITISH EDUCATORS VISIT FIELD

CHATHAM, Ontario, May 10.—Headmasters of a number of England's most famous public schools, now touring America, recently visited the Turner Valley gas field and inspected the drilling and production operations.

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS
Pipe Line Statement for March

Runs

	Month	Dly. av.
Prairie P. L. Co.*	4,107,500	132,500
Gulf P. L. Co.	1,481,467	47,789
Texas P. L. Co.	779,779	25,154
Empire P. L. Co.	1,754,140	56,585
Magnolia P. L. Co.	1,908,973	61,580
Cosden P. L. Co.	677,545	21,856
Sinclair P. L. Co.	3,126,350	100,850
Oklahoma P. L. Co.	3,387,856	109,286
Other lines	5,394,000	174,000
Total March	22,617,610	729,600
Total February	20,918,178	747,078
Difference	1,699,432	17,478

Shipments

Prairie P. L. Co.	6,114,572	197,244
Gulf P. L. Co.	1,798,072	58,002
Texas P. L. Co.	1,440,845	46,479
Empire P. L. Co.	2,227,650	71,860
Magnolia P. L. Co.	2,246,683	72,474
Cosden P. L. Co.	992,752	32,024
Sinclair P. L. Co.	3,596,147	116,005
Oklahoma P. L. Co.	3,375,629	108,891
Other lines	4,557,000	147,000
Total March	26,349,350	849,979
Total February	23,895,404	853,408
Difference	546,054	3,430

Stocks

Prairie O. & G. Co.*	36,486,000
Gulf P. L. and Gypsy Oil Co.	8,769,953
The Texas Company	5,956,536
Empire P. L. Co.	6,504,110
Cosden P. L. Co.	3,543,508
Sinclair Crude Oil Pur. Co.	20,233,000
Magnolia Petroleum Co.	7,022,692
Oklahoma P. L. Co.	3,398,114
Carter Oil Co.	9,685,431
Other lines*	25,380,580
Total March	126,988,924
Total February	128,888,502
Difference	1,899,578

*Estimated. Prairie and Sinclair shipments include Texas crude oil.

EASTERN PIPE LINE REPORT FOR MONTH OF FEBRUARY

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Indiana and Michigan for January and February:

	Jan. 1930	Feb. 1930
Nat. Transit	439,729.00	366,221.35
S. W. Pa. P. L.	90,898.30	85,041.96
Eureka P. L.	367,547.89	354,681.93
Buckeye P. L. (Macksb'g)	358,430.62	342,776.22
Buckeye P. L. (Cleve.)	10,647.91	9,978.95
Buckeye P. L. (Lima, etc.)	85,676.96	97,135.19
Indiana P. L.	3,482.83	4,149.46
Cumberland P. L.	182,383.51	179,067.13
N. Y. Transit	37,659.17	36,498.53
Tidewater P. L.	24,115.65	25,856.05
Pure Oil	305,214.10	280,894.48
Paragon Dev.	10,541.45	10,332.48
Stoll Oil Ref.	3,899.80	4,016.89
Bradford Tran.	432,916.17	422,524.62
Total	2,353,143.36	2,219,175.24
Daily average	75,907.85	79,256.26

Note—Paragon Refining Co. had other receipts of 135,556.83 bbls. Paragon Development had other receipts of 177.81 bbls. Indian Refining Co. had other receipts of 328,689.28 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for January and February:

	Jan. 1930	Feb. 1930
Nat. Transit	566,559.42	546,268.96
S. W. Pa. P. L.	292,868.36	297,049.02
Eureka P. L.	261,587.25	257,040.33
Buckeye P. L. (Macksb'g)	188,277.50	181,006.51
Buckeye P. L. (Cleve.)	2,188.64	1,711.55
Buckeye P. L. (Lima, etc.)	900,037.30	1,018,919.26
Indiana P. L.	1,549,996.22	1,400,007.24
Cumberland P. L.	238,821.39	107,172.62
Southern P. L.	62,190.22	7,067.18
N. Y. Transit	189,945.65	130,029.94
Northern P. L.	196,645.06	203,652.26
Tidewater P. L.	392,513.08	445,604.24
Pure Oil	270,432.39	238,714.23
Paragon Ref.	157,944.28	137,377.36
Indian Ref.	461,663.58	397,789.25
Paragon Dev.	10,643.37	10,892.51
Bradford Trans.	486,905.56	475,276.19
Tuscarora Oil	517,121.55	426,375.21
Total	6,746,341.69	6,281,953.85
Daily average	217,623.92	224,355.46

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky and Indiana at the close of January and February:

	Jan. 1930	Feb. 1930
Nat. Transit	787,014.24	769,712.92
S. W. Pa. P. L.	511,042.96	517,351.25
Eureka P. L.	1,427,435.53	1,450,367.33
Buckeye P. L. (Macksb'g)	609,936.03	703,523.57
Buckeye P. L. (Cleve.)	85,063.78	66,689.66
Buckeye P. L. (Lima, etc.)	4,764,964.92	5,172,616.79
Indiana P. L.	742,902.49	782,290.66
Cumberland P. L.	470,501.33	548,921.63
Southern P. L.	316,573.11	347,291.82
N. Y. Transit	310,237.52	349,684.13
Northern P. L.	569,978.67	606,100.40
Tidewater P. L.	915,732.49	994,005.84
Pure Oil	64,343.78	114,026.32
Paragon Ref.	29,271.88	27,184.65
Indian Ref.	142,994.08	74,487.14
Paragon Dev.	6,142.46	5,932.46
Tuscarora	266,285.45	265,783.29
Bradford Trans.	199,625.21	195,601.39
Total	12,220,045.93	12,991,561.25
Increase	966,092.47	771,515.39

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1927	1928	1929	1930
Jan.	56,209	52,904	51,749	75,907
Feb.	61,298	57,002	51,833	79,256
Mar.	63,247	57,485	54,252	.....
April	60,927	56,812	58,444	.....
May	60,284	62,067	59,902	.....
June	62,757	58,230	58,833	.....
July	58,674	57,144	66,087	.....
Aug.	60,870	57,745	66,087	.....
Sept.	60,285	53,487	67,315	.....
Oct.	147,080	58,100	76,093	.....
Nov.	57,275	53,865	74,831	.....
Dec.	53,089	52,025	74,561	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1928	1929	1930
Jan.	12,276,710	7,596,564	12,220,045
Feb.	12,180,419	8,738,835	12,991,561
Mar.	12,239,725	9,002,058	.....
April	11,740,125	8,978,172	.....
May	11,602,468	8,903,560	.....
June	11,287,678	8,921,275	.....
July	10,819,331	9,211,595	.....
Aug.	10,236,743	9,440,643	.....
Sept.	9,660,910	9,443,067	.....
Oct.	9,229,709	9,441,101	.....
Nov.	8,366,553	9,868,538	.....
Dec.	7,539,555	11,253,953	.....

Daily Average Shipments

	1927	1928	1929	1930
Jan.	141,227	146,465	165,721	217,622
Feb.	138,534	167,368	159,387	224,355
Mar.	133,777	158,883	161,474	.....
April	140,227	172,935	169,737	.....
May	144,594	180,559	184,281	.....
June	149,772	188,024	185,401	.....
July	151,850	189,470	194,763	.....
Aug.	188,653	192,853	184,946	.....
Sept.	144,213	194,138	201,214	.....
Oct.	147,036	176,000	191,367	.....
Nov.	150,975	176,898	202,743	.....
Dec.	144,504	173,572	186,257	.....

Grades of Oil

The following table shows the amount of the different grades of oil held by the Eastern Pipe Lines at the close of January and February showing gross stocks of the above fields:

	Jan. 1930	Feb. 1930
Pennsylvania	3,617,731.86	3,795,555.27
Lima	687,915.50	751,878.13
Kentucky	540,502.40	580,013.89
Mid-Continent	7,267,468.33	7,739,469.13
Illinois	55,156.42	24,274.24
Michigan	51,270.42	100,370.40
Total	12,220,045.93	12,991,561.25

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, March 1	2,305,915.75
Runs from wells	522,560.28
Other receipts	93,619.28
Regular deliveries	388,680.54
Other deliveries	328,364.66

The amount of Illinois oil run by the Tidewater Pipe Co. in February was 25,856.05 bbls. Deliveries were 25,856.05 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1930—	Runs	Deliveries
Feb.	548,416.33	414,536.59
1929—		
Feb.	517,320.17	503,387.70
Mar.	728,319.67	586,049.60
April	515,374.27	654,297.96
May	608,981.60	673,812.83
June	568,454.70	818,845.97
July	611,106.79	828,159.44
Aug.	625,351.99	746,425.06
Sept.	582,457.66	669,947.72
Oct.	622,302.83	558,558.68
Nov.	565,108.75	427,064.63
1930—		
Jan.	543,387.95	498,293.93

Tidewater Pipe Co., Ltd., also delivered in February 114,199.07 bbls. Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
April	16,667	.....	32,333	13,233	2,234	64,467	.....	.....	.....	.....	7,333	65,200
May	16,226	2,416	31,326	10,806	2,129	62,903	.....	.....	.....	.....	.....	62,903
June	14,866	3,167	23,100	10,300	6,100	57,533	.....	.....	.....	.....	.....	57,533
July	15,387	4,806	34,290	19,388	2,452	76,323	.....	.....	.....	.....	4,161	80,484
August	20,389	3,129	35,226	18,903	5,548	83,194	.....	.....	.....	.....	12,161	95,355
September	19,433	.....	31,834	11,900	6,200	69,367	.....	.....	.....	.....	4,800	74,167
October	9,065	4,677	42,065	12,000	9,677	77,484	.....	.....	.....	.....	4,097	81,581
November	18,900	3,167	41,667	14,699	3,767	82,200	.....	.....	.....	.....	2,400	84,600
December	12,968	.....	46,129	13,613	7,225	79,935	.....	.....	.....	.....	2,335	82,290
January	18,484	1,936	34,257	22,323	9,516	86,516	.....	.....	.....	.....	2,258	88,774
February	7,678	.....	24,714	14,321	5,000	51,714	.....	.....	.....	.....	2,607	54,321
March	10,548	3,065	28,871	8,774	22,484	73,742	.....	.....	.....	.....	805	74,548

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total all ports
April	19,733	18,367	137,233	50,267	22,567	248,167	6,867	25,066	10,367	1,500	43,800	291,967
May	29,806	19,258	138,000	49,936	22,322	259,322	6,677	26,323	3,000	1,323	37,323	296,645
June	31,433	8,667	134,600	42,967	18,300	235,967	8,600	22,633	11,800	2,033	45,066	281,033
July	40,097	15,129	111,677	43,420	31,516	241,839	4,774	12,097	9,516	161	26,548	268,387
August	33,387	14,355	162,644	30,936	20,355	261,677	4,226	12,742	.....	1,484	18,452	280,129
September	32,967	9,000	136,633	54,300	32,900	265,800	6,900	22,900	5,367	1,333	36,500	302,300
October	39,936	10,519	137,096	38,160	38,644	264,355	6,613	13,388	11,064	4,419	35,484	299,839
November	23,633	18,900	125,200	41,100	28,200	237,033	2,233	12,533	6,667	2,500	23,933	260,966
December	29,774	15,387	133,742	31,000	23,775	233,678	5,548	16,484	6,613	1,774	30,419	264,097
January	21,161	10,678	134,581	38,677	43,806	248,903	4,322	6,453	.....	548	11,323	260,226
February	24,500	14,714	147,357	36,036	39,786	262,393	2,821	11,072	3,500	1,964	19,357	281,750
March	28,355	3,839	151,806	36,645	34,903	255,548	4,323	11,645	839	2,419	19,226	274,774

GROSS PRODUCTION OF CRUDE OIL IN THE UNITED STATES FOR 12 MONTHS

(In Barrels of 42 Gallons)

1929-30—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
April:	Month	23,295,060	20,235,390	23,493,097	3,112,740	2,188,680	1,702,497	2,085,030	3,524,000	79,636,494
	Daily average	776,502	674,513	783,102	103,758	72,956	56,750	69,501	117,467	2,654,550
May:	Month	24,053,351	21,345,453	24,489,101	3,665,099	2,220,158	1,713,261	2,252,522	3,879,000	83,617,945
	Daily average	775,915	688,563	789,965	118,229	71,618	55,267	72,262	125,129	2,697,353
June:	Month	24,624,627	20,561,112	24,698,029	3,636,150	2,112,270	1,699,581	2,180,752	3,887,000	83,399,521
	Daily average	820,821	685,371	823,267	121,205	70,337	56,653	72,692	129,567	2,779,984
July:	Month	26,796,627	22,371,925	26,969,989	3,867,157	2,137,047	1,716,488	2,360,836	4,439,000	90,659,069
	Daily average	864,407	721,675	869,997	124,747	68,937	55,370	76,156	143,200	2,924,486
August:	Month	27,233,353	22,429,522	27,491,362	3,816,555	2,086,083	1,764,973	2,478,016	4,363,000	91,662,864
	Daily average	878,495	723,532	886,818	123,115	67,298	56,934	79,936	140,742	2,956,866
September:	Month	26,104,264	21,299,490	26,067,065	3,780,690	1,959,720	1,718,250	2,347,020	4,075,000	87,351,499
	Daily average	870,142	709,983	868,902	126,023	65,324	57,275	78,234	135,917	2,911,716
October:	Month	26,895,160	20,821,646	26,412,167	3,429,468	2,000,027	1,956,326	2,392,952	4,482,000	88,389,746
	Daily average	867,586	671,666	852,004	110,628	64,517	63,107	77,192	141,358	2,851,282
November:	Month	21,317,540	19,193,760	24,896,034	3,430,560	1,911,060	1,853,565	2,350,110	4,029,000	78,981,629
	Daily average	710,585	639,798	829,868	114,352	63,702	61,785	78,337	134,300	2,632,720
December:	Month	21,705,554	20,092,876	25,609,823	3,549,066	1,917,071	1,878,352	2,378,754	4,168,100	81,239,596
	Daily average	700,179	648,156	818,394	114,486	61,841	60,592	76,734	134,455	2,622,568
January:	Month	21,983,242	20,802,984	25,284,352	3,273,197	1,817,685	1,780,969	2,151,090	4,216,000	81,309,519
	Daily average	709,137	671,064	815,624	105,587	58,635	57,451	69,390	136,000	2,622,888
February:	Month	20,885,660	17,977,624	23,314,637	2,965,704	1,608,376	1,738,425	2,027,984	3,780,000	74,298,410
	Daily average	745,916	642,058	832,668	105,918	57,442	62,087	72,429	135,000	2,653,517
March:	Month	19,699,979	19,112,306	25,503,880	3,504,395	1,817,871	1,943,093	2,337,028	4,231,500	78,149,252
	Daily average	635,483	616,526	822,679	113,045	58,641	62,680	75,388	136,500	2,520,942
Total 12 months		284,594,417	246,244,088	304,229,036	42,030,781	23,776,048	21,465,780	27,342,394	49,073,600	998,755,544

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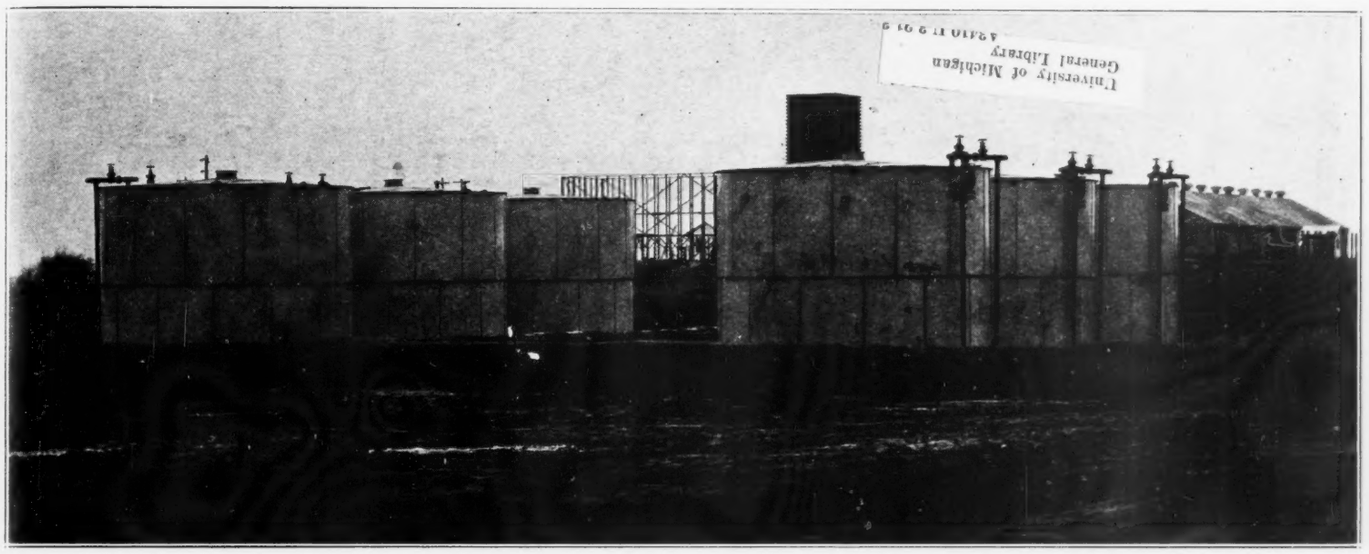

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MADE OF AMERICAN

When lease tanks of a type that allow breathing are used, rich vapors escape into the air and the gravity and volume of the oil are reduced. But when MALONEY *Vapor-Pressure* Tanks are used, breathing is eliminated and the valuable fractions which breathing would waste are sold with the balance of the oil.

You are already paying to produce the oil. To turn the breathing losses into checks from the pipe line company increases income without adding to production expense. Use the tanks that are manufactured to give you maximum profits.

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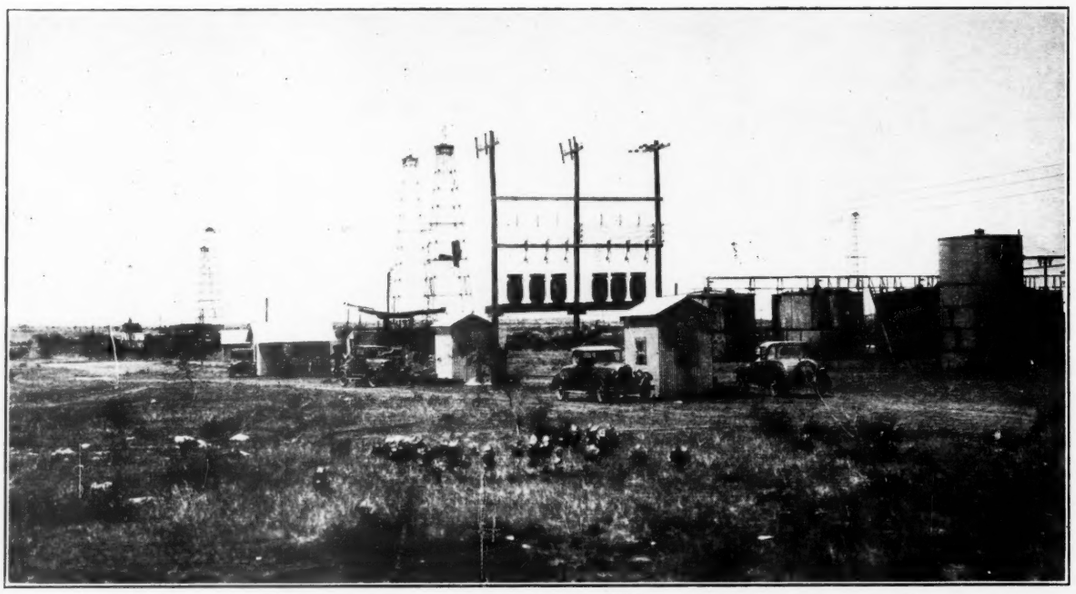
Advertisers' Index on Page 33 Table of Contents on Page 34



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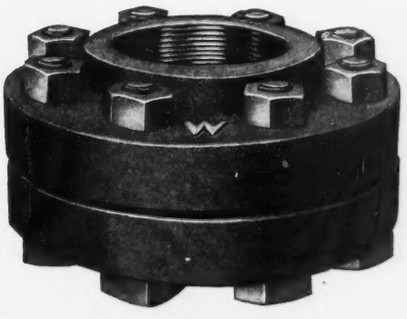

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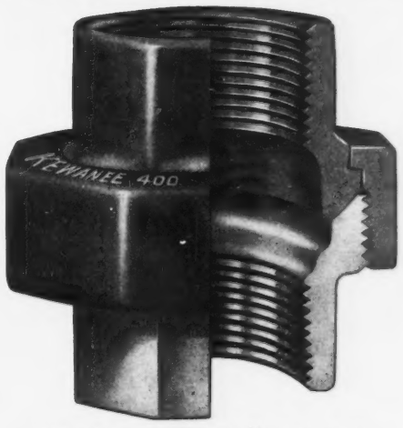

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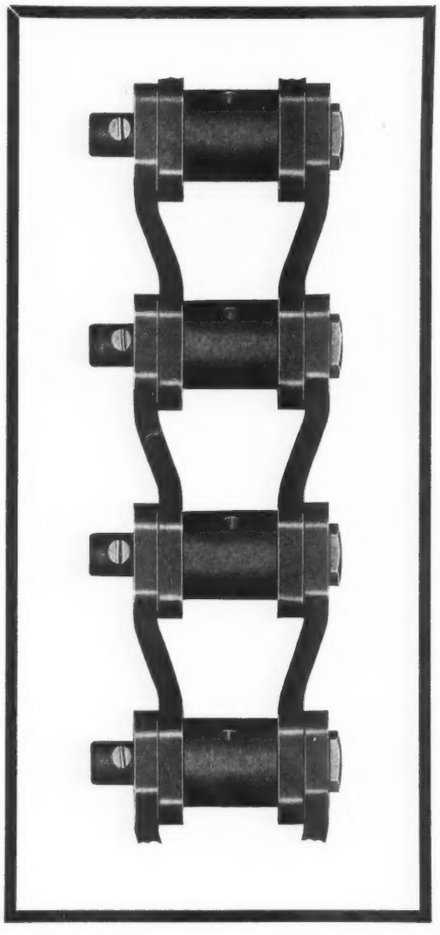
This New Rotary Chain Can Stand More Punishment



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They don't come any tougher, and we invite comparison with any other chain on the market. The uniform quality of SPENGLER'S Rotary Chain is just another of its outstanding features. You can stop your chain troubles today by getting in touch with a Spengler representative.

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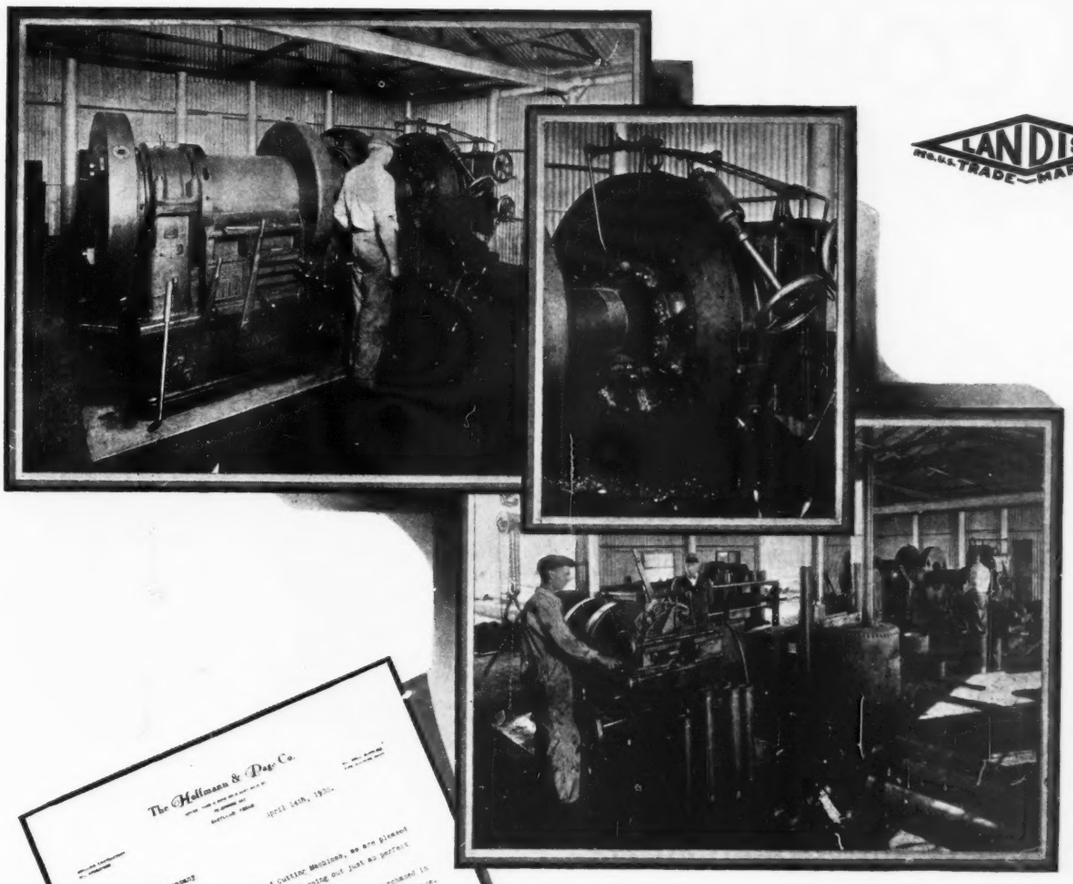

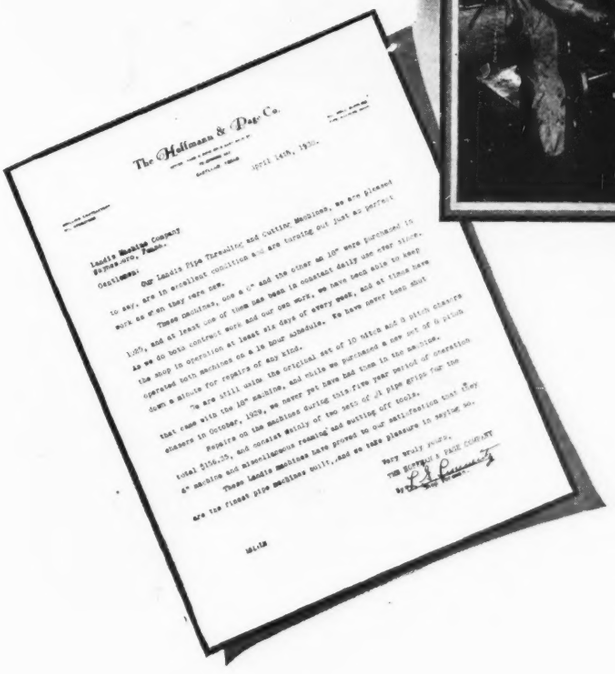
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Waynesboro, Penna.

Gentlemen:

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These machines, one a 1" and the other an 10" were purchased in 1925, and at least one of them has been in constant daily use ever since. As we do both contract work and our own work, we have been able to keep the shop in operation at least six days of every week, and at times have operated both machines on a 24 hour schedule. We have never been shut down a minute for repairs of any kind.

We are still using the original set of 10 Mich and 3 pitch chasers that came with the 10" machine, and while we purchased a new set of 6 pitch chasers in October, 1929, we never yet have had time to the machine.

Prairie on the machines during this five year period of operation total $16.25, and consist mainly of two sets of 2½ pipe grips for the 4" machine and miscellaneous reaming and cutting off tools.

These Landis machines have proved to our satisfaction that they are the finest pipe machines built, and we take pleasure in saying so.

Very truly yours,
THE HOFFMANN & PAGE COMPANY
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"The finest pipe machine built"—

That is the opinion of Mr. L. G. Lemmertz of the Hoffman & Page Co., Eastland, Texas, drilling contractors, oil operators and manufacturers of high-grade oil well supplies.

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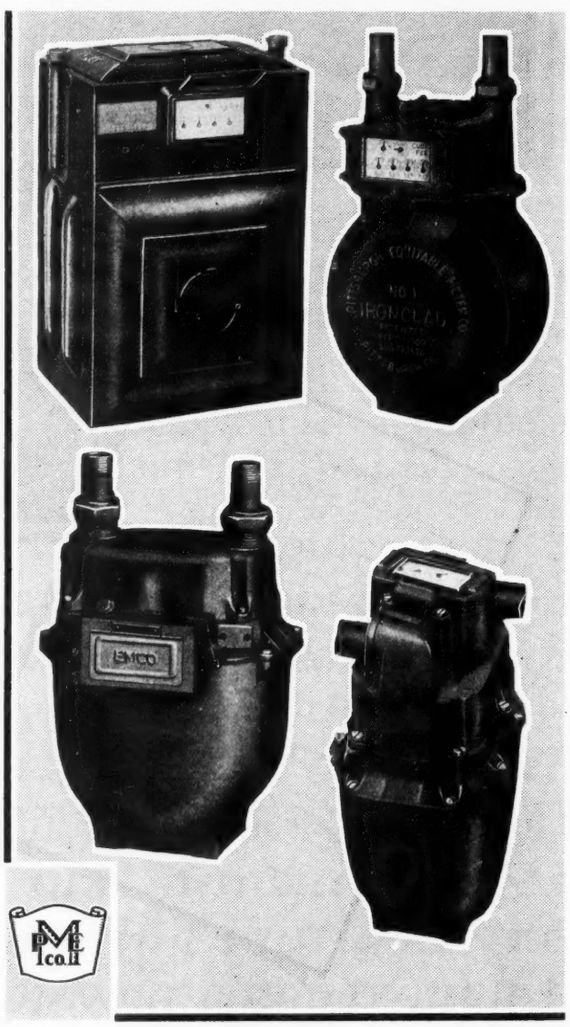

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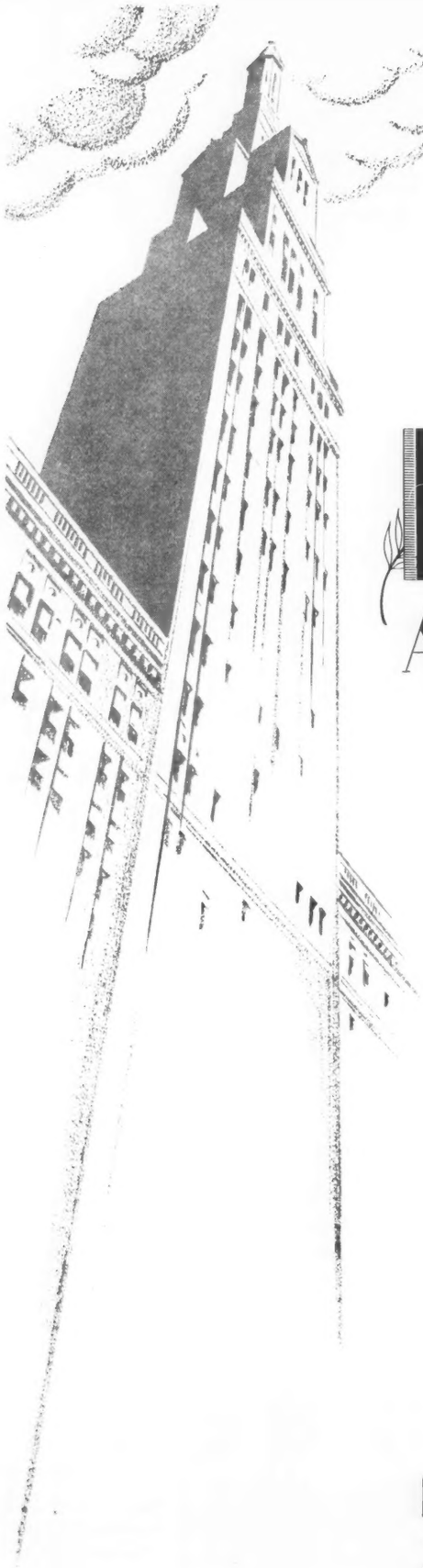
OIL TOOLS, INC.
P. O. Box L, Huntington Park, Calif.
California Branches
Coalinga, Ventura, Taft, Bakersfield

Mid-Continent Distributors
B. & A. SPECIALTY CO.
220 E. Brady St., Tulsa, Okla.
2301 Commerce St., Houston, Tex.

Don't Use Cast - Iron Equipment — Cement is Stronger and Better

Stocks carried by Dealers in all active Mid-Continent fields.



Perspective as A Business Asset

Perspective is that which dwarfs a distant mountain, yet magnifies its bulk at close range. Perspective is also that quality highly valued in modern commerce. An ability to inject human understanding into a business transaction.

That sort of perspective has been cultivated by The Exchange National Bank of Tulsa, until it has become an asset of inestimable value. Problems of finance brought to this bank are considered . . . not merely from a banking viewpoint . . but also from a viewpoint which understands the oil industry's many and varied problems.

Progressive banking institutions no longer rely solely on efficient service for distinction. A bank must get close to the problems of its customers to maintain the right perspective. It is this ability which impresses customers of The Exchange National Bank.

EXCHANGE BANKS OF TULSA

The Exchange National Bank · Exchange Trust Company · Exchange National Company

THE CELEBRATED SKIP TOOTH DIE

(Genuine Nye)

REG. U. S. PAT. OFFICE

A LETTER FROM HARRY G. NYE

TO THE OIL MEN OF THE U. S. A.

FELLOW CITIZENS:

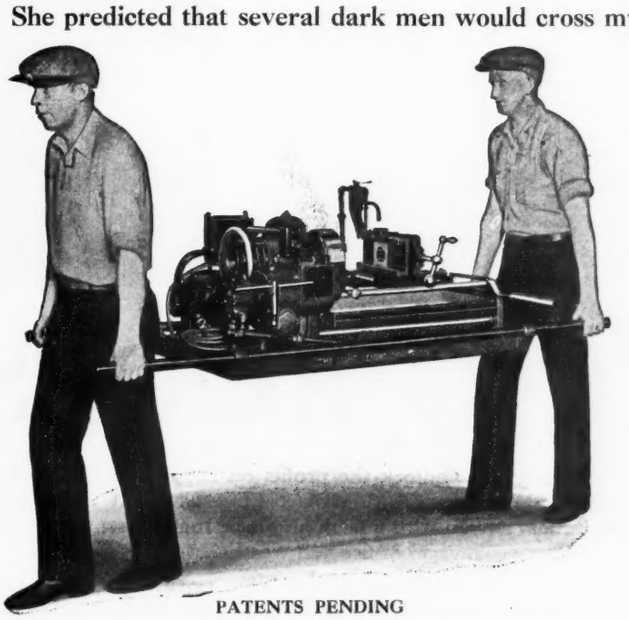
Not long ago I was at a church fair, and a beautiful young lady said that for fifty cents she would read my character if I would let her hold my hand. I told her, "sure". I felt it was well worth the money, whether she read my character or not.

I don't deny that I enjoyed it, but I want to say that, as a way of reading a man's character, it is no good. My character may have been O. K. when she started, but the longer she held my hand, the worse it got.

She said that the way she could tell was by looking at the lines. I never supposed that I had so many. She pointed out the heart line, and the life line, and about everything but the New Bedford line and the Pennsylvania.

The young lady said I had had a lot of trouble, and I asked her if she was married, too. She also said that I was going to have a lot more trouble, but I told her that I was in the tool manufacturing business, so that was no news to me.

She predicted that several dark men would cross my path, but I explained to her that I changed a tire that morning, and that was how those lines got that way. She told me to beware of a red-headed woman. I told her I would—*that I always was.*



PATENTS PENDING

"THE LIGHTWEIGHT CHAMPION"

POWER PIPE THREADING MACHINE
THREADS, CUTS OFF AND REAMS
CAPACITY ½ TO 2 INCHES

Then the seance broke up. I hadn't noticed that the young lady had red hair herself. I have a pretty good line in other ways, too, but it didn't seem to do me much good after that. But there is something in this reading character by lines, after all.

For instance, you can judge a jobber by the line of pipe-tools he carries. If he has a complete line of the Nye tools, you know he is a good judge of tools, and a good jobber of them. You will be safe in buying pipe-tools from him, or anything else he carries.

If he hasn't the Nye line, drop *me* a line, and I'll call on him and tell him his fortune.

Sincerely yours,

HARRY G. NYE.

Otherwise Known As

The Nye Tool & Machine Works

4120-30 Fullerton Avenue Chicago, Ill.

Copyright, 1930, by Harry G. Nye. All rights reserved.

NYE TOOLS FOR SALE BY ALL LEADING SUPPLY HOUSES

EXCESSIVE FIRE AND EVAPORATION LOSSES SUSTAINED BY OIL COMPANIES

No Longer Necessary——

COLUMBIAN

PIONEERS

K-M-C-O

FLOATING ROOFS

Hundreds of thousands of dollars are *consumed every year by oil fires,* and hundreds of thousands more *vanish in the escaping vapors of evaporation!* Expensive, preventable losses.

Good business practice accepts no excuse as legitimate for losses incurred that *could have been prevented;* but requires every precaution possible to protect its investments.

Padlock the profits on those high gravity fractions. COLUMBIAN FLOATING ROOFS provide you with a latch and lock that resists the severest ravages of fire and weather.

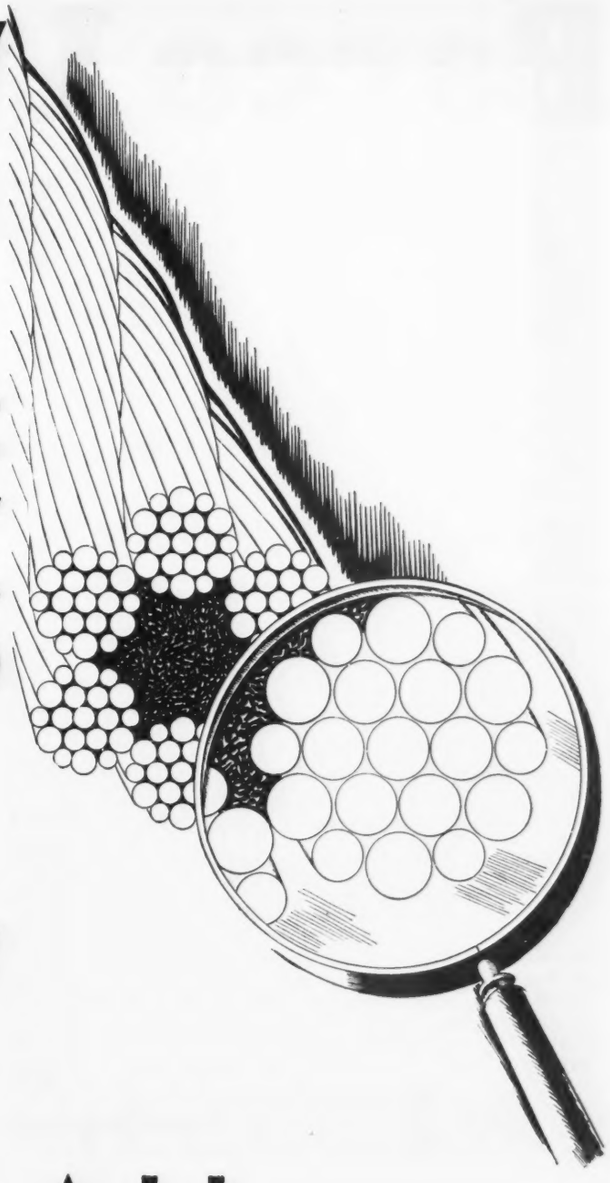
Built to fit any size tank, COLUMBIAN FLOATING ROOFS are adaptable to every style and type of tank. Investigate the facts. Write or wire for details and prices.

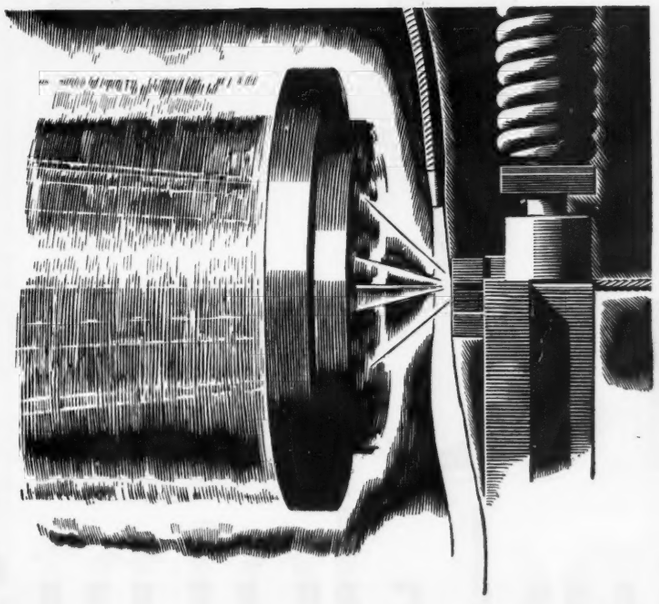
❖ ❖ **FOR SAFETY — SPECIFY *COLUMBIAN*** ❖ ❖

THE KIRK-MORROW IRON WORKS COMPANY
IOLA, KANSAS

COLUMBIAN STEEL TANK COMPANY
KANSAS CITY, MO.

NOW MACWHYTE WIRE LINES *Lubricated*





ALL THROUGH!

Not just the hemp core—not just the outside of the line—but every wire in the line individually greased during fabrication. Every wire sprayed with high grade petroleum grease as it is stranded. Protects the wires against internal friction. Longer service—greater economy. Macwhyte Company, Kenosha, Wis.

Barco Lubricated Plug Valves

WHATEVER your plug valve requirement, there is a Barco to fill it.

In addition to the regular features of quarter-turn control, no valve seats to grind or replace, self-wiping operation — Barco Lubricated Plug Valves do not stick or leak, can be packed under pressure without danger of the plug blowing out, and have remarkably low maintenance. The lubricant is not washed out by line pressure, nor is it used hydraulically to unseat the plug. The valve is made absolutely tight by fine machining and lapping, and can be adjusted to any degree of ease of operation.

Write for Catalog 314, describing the valves illustrated.

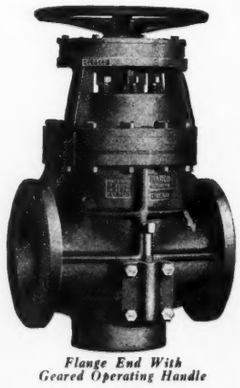
Agents:

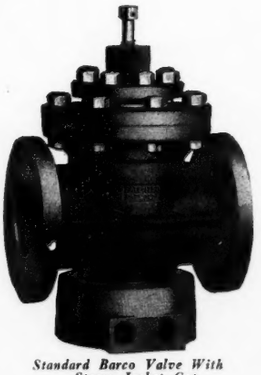
Vinson-Canter Co., Tulsa, Oklahoma
M. N. Dannenbaum Co., Houston, Texas
The Steam Supply & Rubber Co., Seattle, Washington
Greene Brothers, Wichita Falls, Texas
Herbert Wolcott, El Paso, Texas
Petroleum Equipment Company, Los Angeles, Calif.

Barco Manufacturing Company
1801 Winnemac Avenue,
Chicago, Illinois

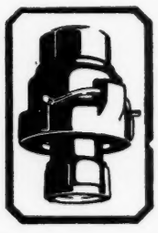
Screw End Straight Way

Flange End Straight Way


Flange End With Geared Operating Handle


Standard Barco Valve With Steam Jacket Cap

BARCO



Valves and Joints

OGJ 5-15 Gray

Check up!

THE COLOR—PURITY AND OTHER DESIRABLE QUALITIES OF WHITE OAK—ACID TREATED—STEAM REFINED STOCK

THE LIGHT OLIVE GREEN COLOR indicates at a glance its desirability for all purposes where a steam refined stock can be used.

Purity—no trace of acid, or other foreign substance.

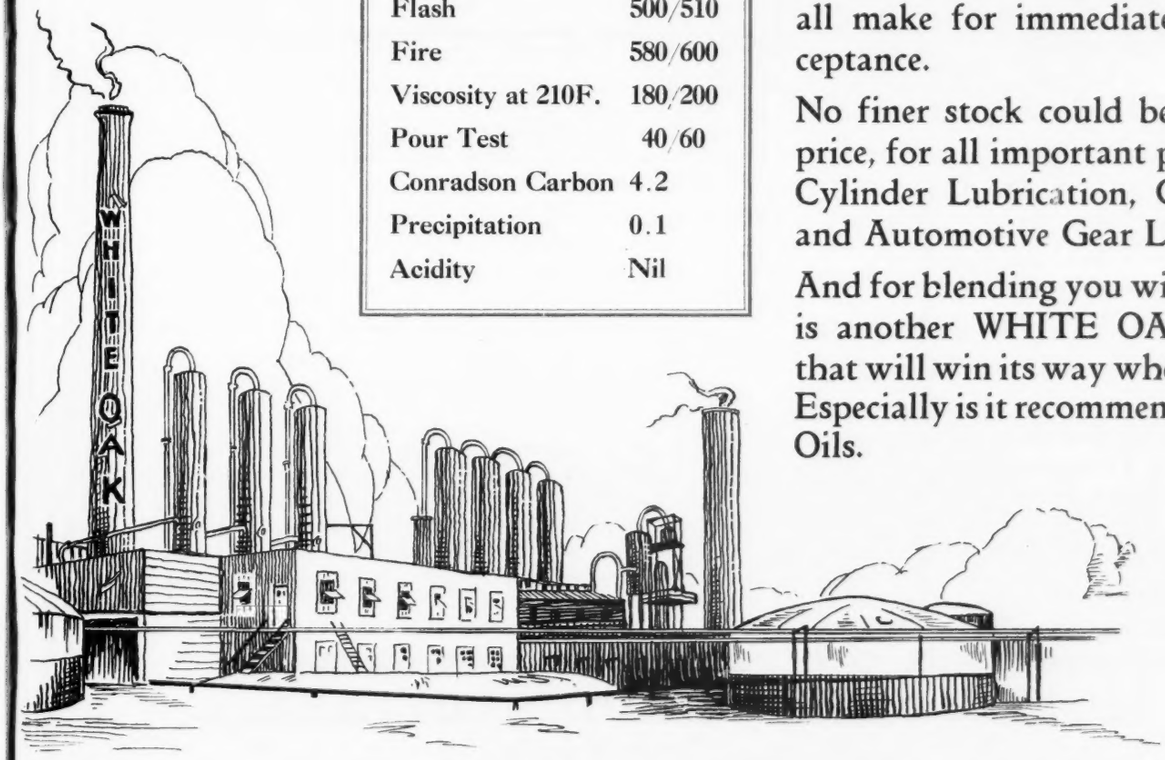
Flash—Fire—Viscosity—Cold Test—all make for immediate consumer acceptance.

No finer stock could be found, at the price, for all important phases of Steam Cylinder Lubrication, Grease Making, and Automotive Gear Lubrication.

And for blending you will find that this is another WHITE OAK PRODUCT that will win its way wherever it is used! Especially is it recommended for Tractor Oils.

Specifications

Color	Light Olive Green
Gravity	20/22
Flash	500/510
Fire	580/600
Viscosity at 210F.	180/200
Pour Test	40/60
Conradson Carbon	4.2
Precipitation	0.1
Acidity	Nil



64/66-375 Gasoline
58/60 U. S. Motor Anti-Knock Gasoline
38/40 Distillate
32/34 Gas Oil
All grades Fuel Oil and Naphthas

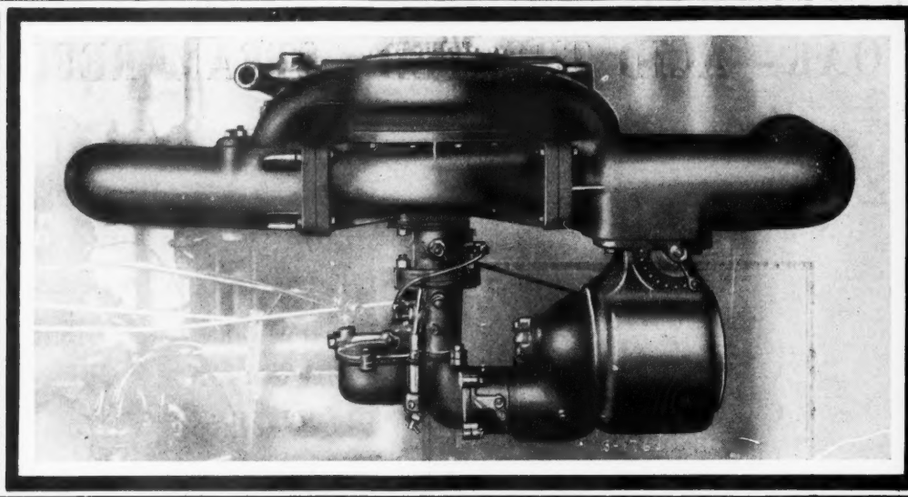
WHITE OAK REFINING COMPANY

REFINERS AND MARKETERS
14th Floor Hunt Bldg.
TULSA OKLAHOMA
SUBSIDIARY OF
Gulf States Terminal & Transport Co., Inc.
Export Terminal—New Orleans, La.

WHITE OAK · PETROLEUM PRODUCTS ·

Buffalo

Gas-Gasoline-Oil INDUSTRIAL ENGINES



View of the Buffalo-Godward Fuel Vaporizer, showing the simplicity of design and construction.

4 — 6 — 8 Cylinders

30 H.P. — 250 H.P.

400 RPM — 1500 RPM

No carbon

No sensitive adjustments

No high pressure lines

No fire hazards

No moving parts in vaporizer

Easy to start

Low fuel bills

The success and progress of the Buffalo Gasolene Motor Company since its entrance into the industrial field can be traced directly to its engine building experience; its engineering knowledge as well as its untiring effort to serve.

The new BUFFALO industrial engines bring you gasoline engine dependability with Diesel engine economy; but free from their troubles, burning cheap fuels that can be purchased throughout the country—gas, gasoline, kerosene, distillate, alcohol and light fuel oils. This means a big saving in your fuel bill. They do not require the services of an expert operator.

The Buffalo-Godward vaporizer consists of a heating chamber of large volume and ample surface, interposed between the carburetor and the intake manifold.

The chamber is heated at the bottom by the exhaust gases from the engine. This heat supply is effectively controlled. The mixture as delivered from the carburetor enters the vaporizing chamber, where every particle is directed, by the plates, to move in a curved path; it is deposited upon the plates and sides in the form of a thin film. All of the constituents of the fuel in the film on the plates are quickly vaporized. The mixture as it leaves the chamber is uniform and dry.

BUFFALO GASOLENE MOTOR COMPANY
Buffalo, New York

The IDEAL VESSELS for high-pressure refinery units

The cracking vessel, 6′0″ I. D. by 47′0″ long, shown in the lower illustration on this page, was manufactured as a one-piece forging. It is a good example of the seamless vessels, suitable for the safe operation of high-pressure processes, which the equipment at our Bethlehem Plant is capable of producing.

If the pressure at which you are operating, or plan to operate, is a source of concern, give us an opportunity to show you how Bethlehem facilities may best be utilized to conform with your ideas of dimensions and design.

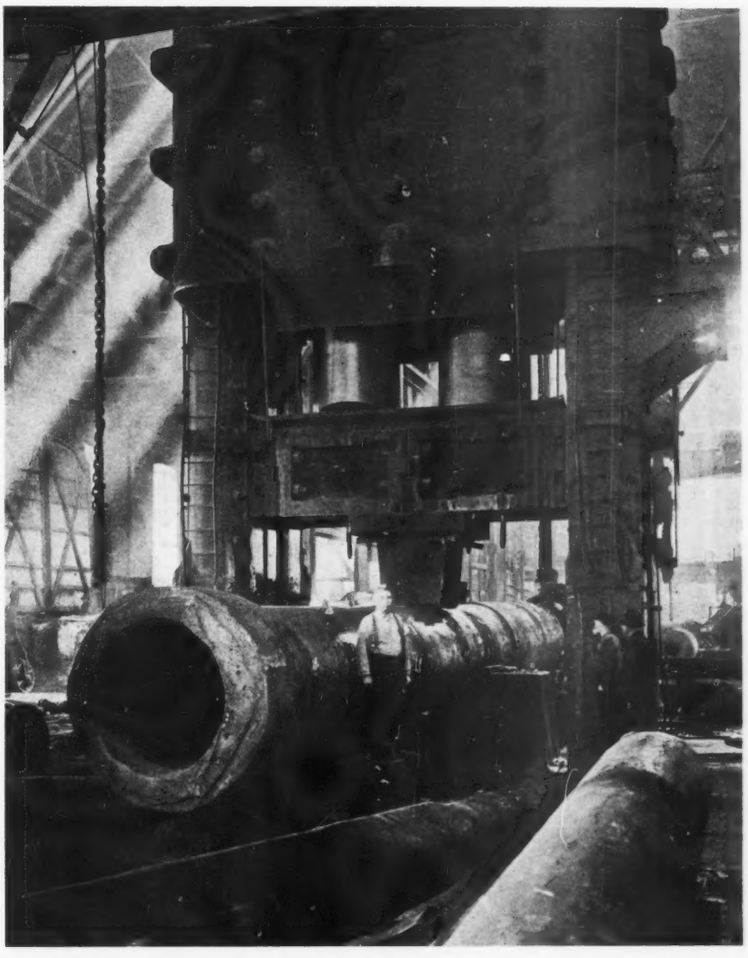
BETHLEHEM STEEL COMPANY

General Offices: Bethlehem, Pa.

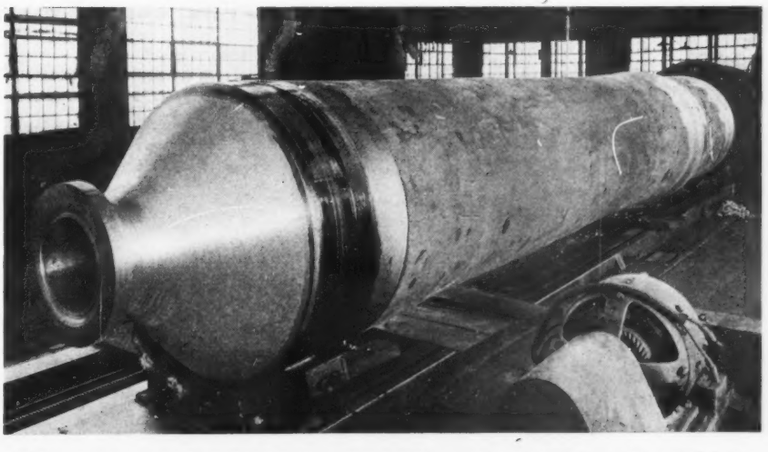
District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Cincinnati, Detroit, Chicago, St. Louis.

Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco, Los Angeles, Portland, Seattle, Honolulu.

Export Distributor: Bethlehem Steel Export Corporation, 25 Broadway, New York City.



14,000 ton Hydraulic press used in forging Bethlehem Seamless Refinery Vessels



Machining a one-piece Seamless Cracking Vessel. This vessel was 47′0″ long with a 6′0″ I. D.

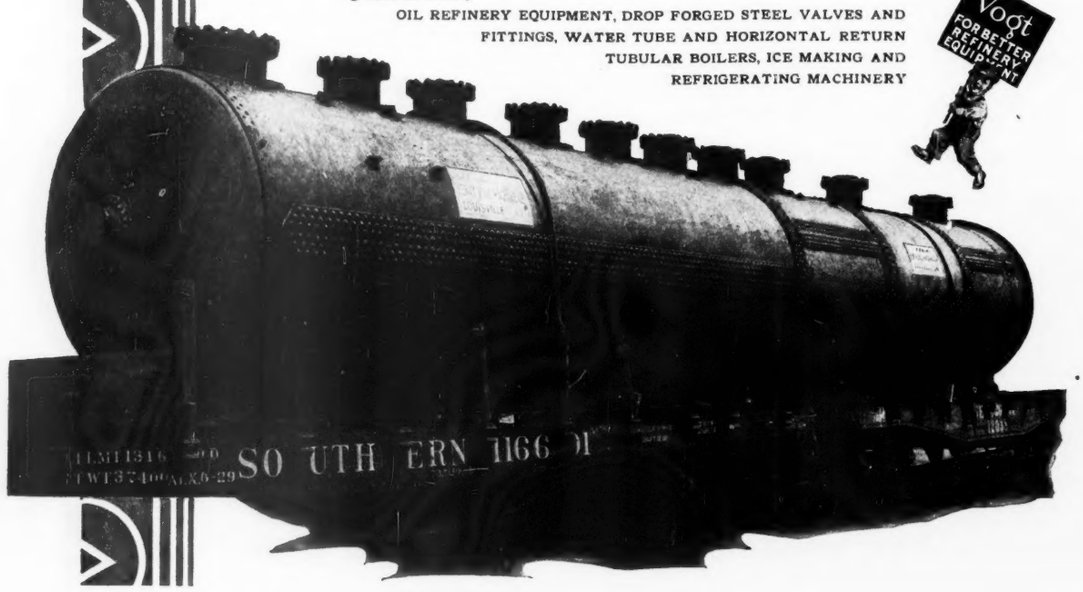
BETHLEHEM *SEAMLESS* REFINERY VESSELS

Vogt
Riveted Vessels
For High Temperatures & Pressures

Write for Information

HENRY VOGT MACHINE CO.
(Incorporated)
LOUISVILLE, KY.
New York Chicago Cleveland Dallas Philadelphia

Manufacturers of
OIL REFINERY EQUIPMENT, DROP FORGED STEEL VALVES AND FITTINGS, WATER TUBE AND HORIZONTAL RETURN TUBULAR BOILERS, ICE MAKING AND REFRIGERATING MACHINERY



1500 sacks of cement intimately mixed and properly placed in an hour's time—all in the day's work for a Halliburton crew.

The Halliburton organization is not content to rest on past achievement. Day after day, engineers, chemists and mechanics are at work seeking to improve still further processes and methods which already represent the utmost in efficiency. Never for a moment does Halliburton lose sight of the obligation it assumed as universally acknowledged leader in its field.

HALLIBURTON

OIL WELL CEMENTING CO.

Duncan, Oklahoma

May we send you, without cost or obligation, our publication, THE CEMENTER? Issued periodically, it contains interesting oil field engineering news, spiced with a dash of humor. Your name and address is the subscription price.

Halliburton Oil Well Cementing Co.
Dept. OG, Duncan, Oklahoma.

Without cost or obligation, please place my name on the list to receive THE CEMENTER regularly as issued.

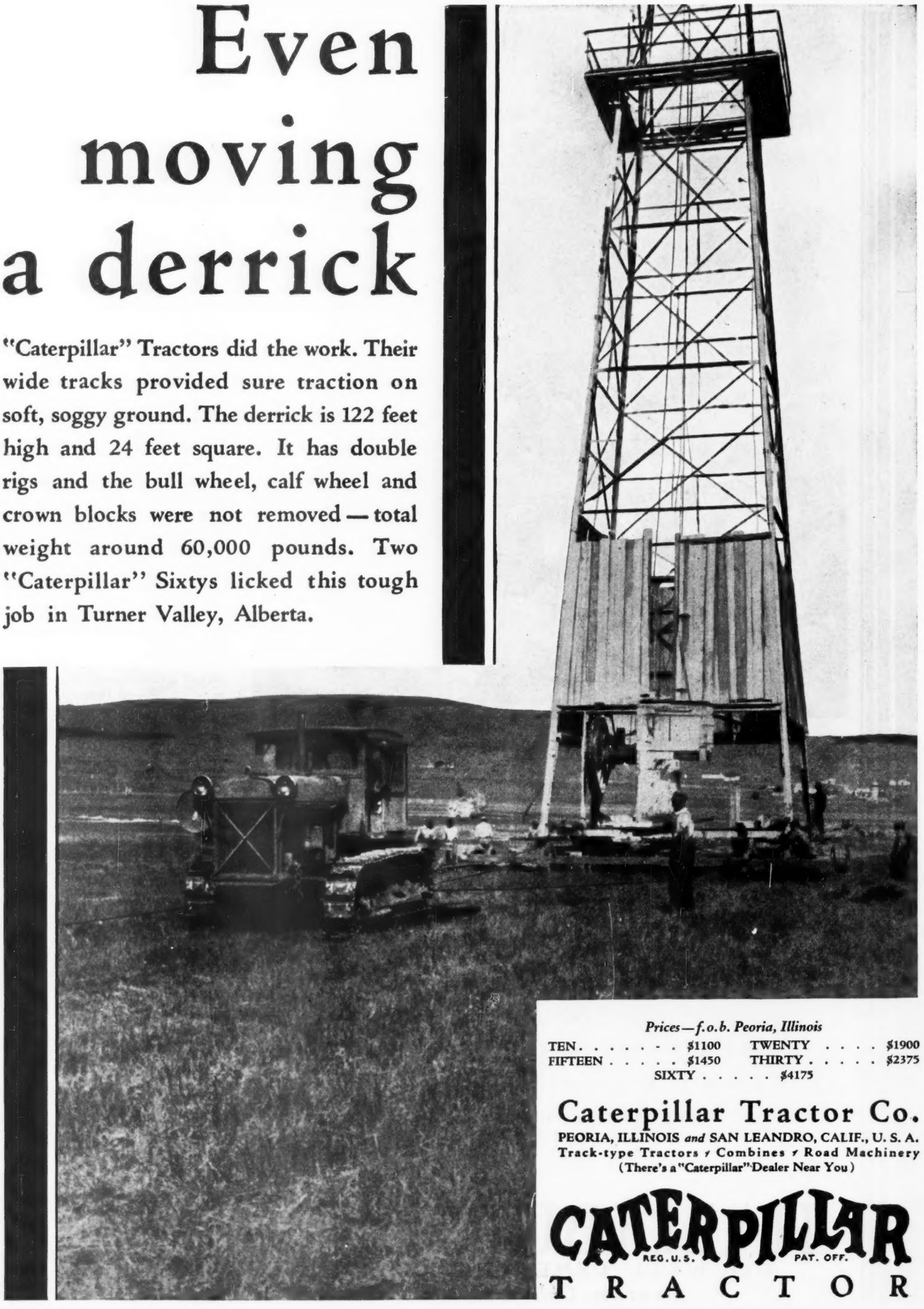
Name _____

Company _____

Address _____

Even moving a derrick

"Caterpillar" Tractors did the work. Their wide tracks provided sure traction on soft, soggy ground. The derrick is 122 feet high and 24 feet square. It has double rigs and the bull wheel, calf wheel and crown blocks were not removed — total weight around 60,000 pounds. Two "Caterpillar" Sixtys licked this tough job in Turner Valley, Alberta.



Prices—f.o.b. Peoria, Illinois

TEN	$1100	TWENTY	$1900
FIFTEEN	$1450	THIRTY	$2375
SIXTY	$4175		

Caterpillar Tractor Co.

PEORIA, ILLINOIS *and* SAN LEANDRO, CALIF., U. S. A.

Track-type Tractors / Combines / Road Machinery

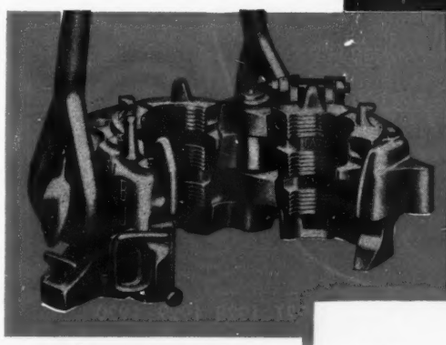
(There's a "Caterpillar" Dealer Near You)

CATERPILLAR
REG. U. S. PAT. OFF.
TRACTOR

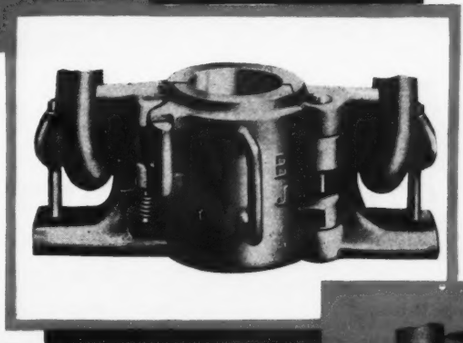
BJ

ELEVATORS

Outstanding in Speed and Safety

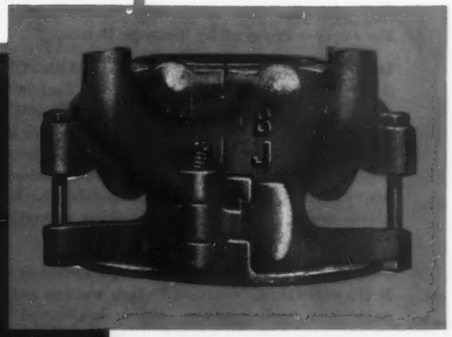


Every Byron Jackson product—elevators for example—is the result of a process of rigid elimination. General types developed by capable engineers have been tested for years, under every condition and wherever oil is found. From this crucible of experience there are available today tools for drilling and production, each of which is certain to perform its particular purpose in a manner to justify our slogan, "Use a BJ and get a Better Job."

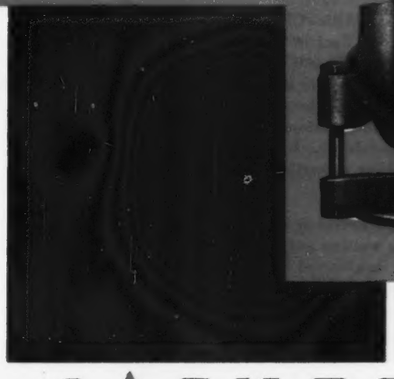


BJ Side Door Slip-Grip Casing Elevator with BJ Weldless Links

BJ Side Door Elevator built in Extra-Heavy, Double-Extra-Heavy and Triple-Extra-Heavy Types.



BJ Weldless Link with Perfection Bend to center the load. Essential for deepdrilling. More than 3 times as strong as your derrick.



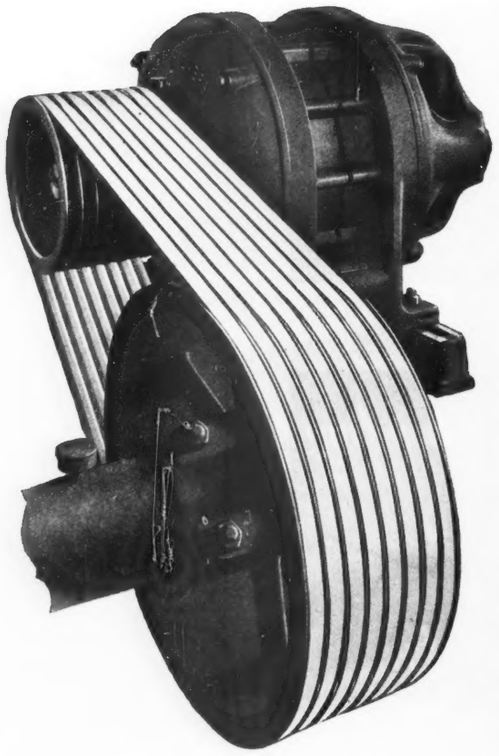
BJ Center Latch Elevators built in Extra-Heavy, Double-Extra-Heavy and Triple-Extra-Heavy Types.

BYRON JACKSON CO.

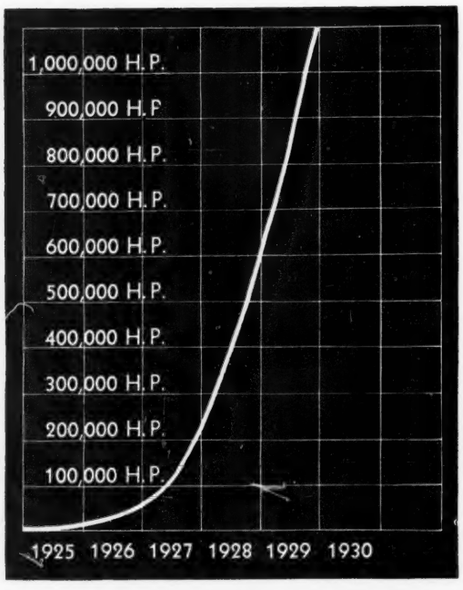
Established 1872

General Offices: 2150 East Slauson Avenue, Los Angeles, California

Tulsa • Oklahoma City • Houston • Shreveport • New York City



The curve shows the truly amazing manner in which Texrope Drives have leaped into the limelight. Since 1926 there has been a tremendous increase in Texrope sales *each year*. The curve is based on the total horsepower of the drives sold. Similar curves, based on actual number of drives or upon sales in dollars, show the same result . . . . an ever-increasing, and remarkably large, demand for Texrope.



This Curve *tells the Story of Texrope's* Astounding Success

ONLY a transmission offering new, revolutionary and practical advantages could have achieved the success enjoyed by Texrope Drives.

In 1925 Texrope was presented by Allis-Chalmers. After approximately five years, we find it used in almost every industry. Today over 75,000 Texrope Drives are in service . . . transmitting over a million horsepower . . . The trend is definitely toward Texrope Drives. This short-center transmission, that is always silent, slipless and dependable, has been given one of the most astounding receptions ever accorded a new product.

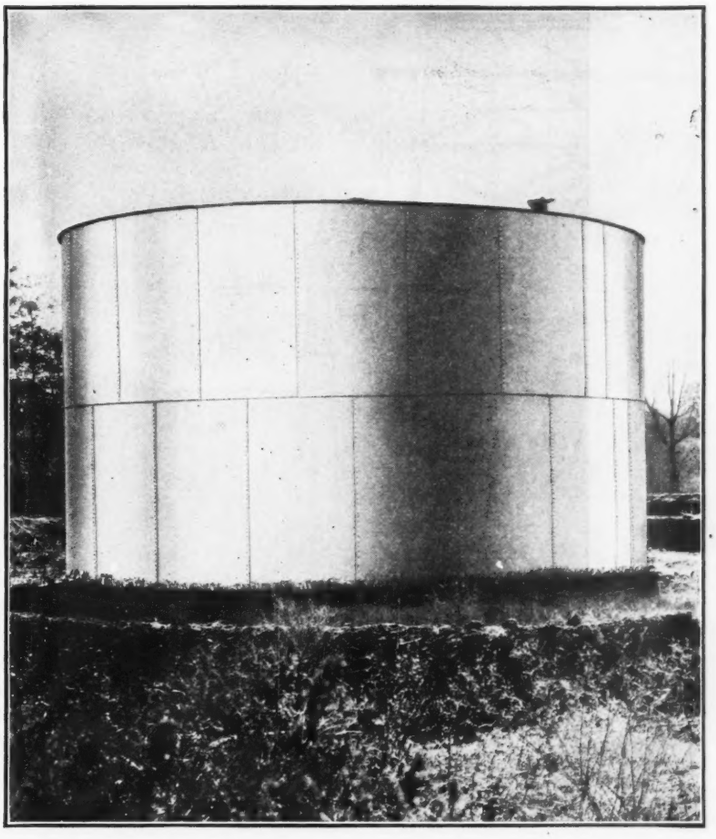
Requiring no lubrication, no belt dressing and very little attention, Texrope Drives assure substantial savings in maintenance. Being unaffected by moisture or dirt, Texropes have proved amazingly satisfactory where these conditions are unavoidable. There being no wear on the sheaves and little on the belts, we find Texropes giving long and uninterrupted service under the most adverse conditions.

Texrope Drives are 98.9% efficient. They are extremely simple and safe . . . and so smooth in starting, so vibrationless in operation that you will instantly recognize their superiority over other forms of transmission . . . Stock Texrope Drives up to 100 H. P. are warehoused at points from which immediate shipment can be made to all parts of the country. Send for a copy of Bulletin 1228-K . . . a picture book of facts about Texrope Drives.

ALLIS-CHALMERS MANUFACTURING CO.
MILWAUKEE (*Texrope Division*) WISCONSIN
Specialists in Power Machinery Since 1846

ALLIS-CHALMERS
TEXROPE DRIVES
THE PERFECT TRANSMISSION FOR EVERY PURPOSE

THE COAT
OF METAL
PROTECTION



The Price is the same . . . The Pigment VITALLY DIFFERENT

You pay about the same for aluminum paint, gallon for gallon, as you pay for other good paints. But you get a paint that has a pigment composed of minute, flat, very thin flakes of pure aluminum.

It is this metallic pigment that makes aluminum paint last longer on iron, steel, concrete or wood. The tiny flakes in the pigment "leaf," pile up one on another, to form a continuous coat of metal protection.

This paint coat checks the common causes of paint failure—moisture—ultra-violet rays—fume attack—all are resisted by aluminum paint.

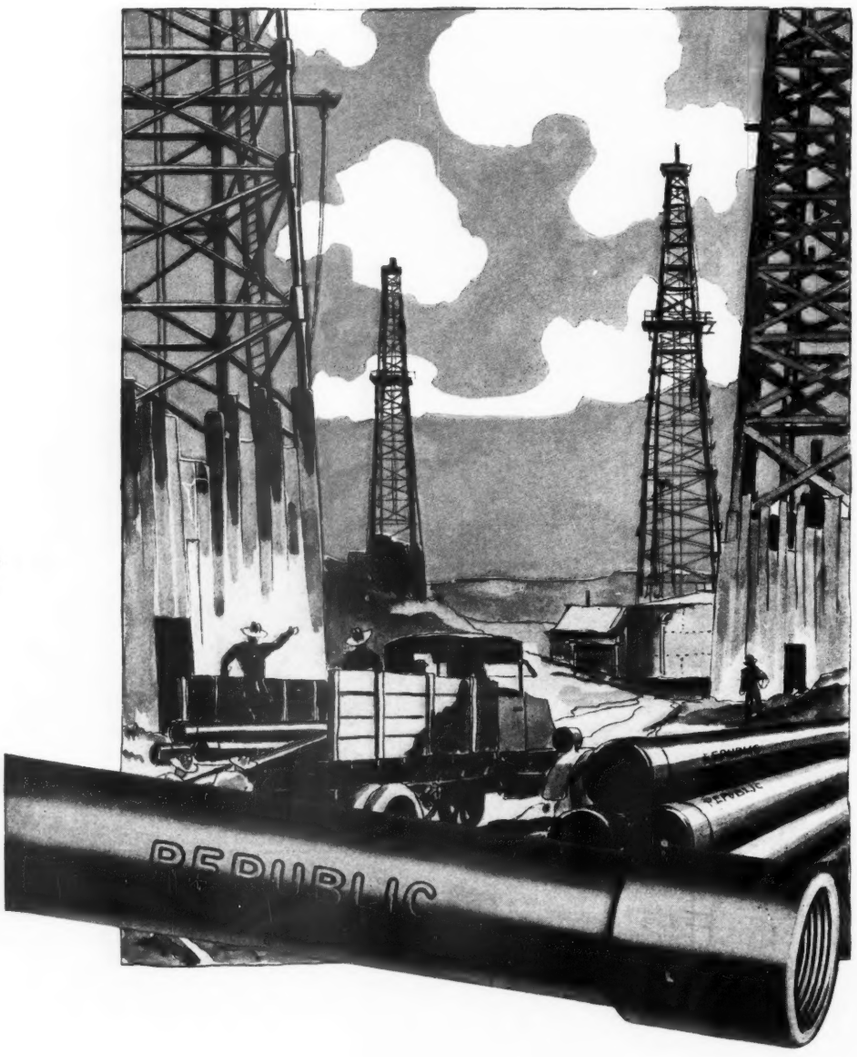
Oil companies, in increasing numbers, are using aluminum paint for tanks, tank cars and practically all types of both inside and outside structures. They find it puts off the need for renewing paint. Its surface stays bright and, because it reflects the sun's rays, it materially cuts down evaporation losses in tanks and tank cars.

Aluminum Company of America does not sell paint. But aluminum paint made with satisfactory vehicles and Alcoa Albron Powder can be purchased from most reputable paint manufacturers, jobbers and dealers.

Be sure the pigment portion is Alcoa Albron Powder and is so designated. Let us send you the booklet, "Aluminum Paint, the Coat of Metal Protection". ALUMINUM COMPANY of AMERICA; 2417 Oliver Building. PITTSBURGH, PA

ALCOA
ALUMINUM
ALBRON

ALCOA ALBRON
POWDER FOR
ALUMINUM PAINT



WHERE THERE IS NO TIME TO LOSE . . .

In the field, it is out of the question to experiment with materials. When pipe or casing is delivered it must be right in every requirement. For it is put to hard use at once, and it must not fail. Joints must fit and be perfectly tight—threads must be clean-cut and correct for easy joining. Republic Steel tubing and casing has been relied upon with satisfaction for years, bearing the strains of holding in harness the flowing well and carrying the production from well to refinery or storage tank. Confidence in Republic Steel oil country tubular goods is always repaid with lasting, trouble-free service

REPUBLIC
STEEL CORPORATION
YOUNGSTOWN, OHIO
STEEL PIPE

No better gas pumping engine has ever been built—the Franklin Valveless leads in simplicity, economy, efficiency

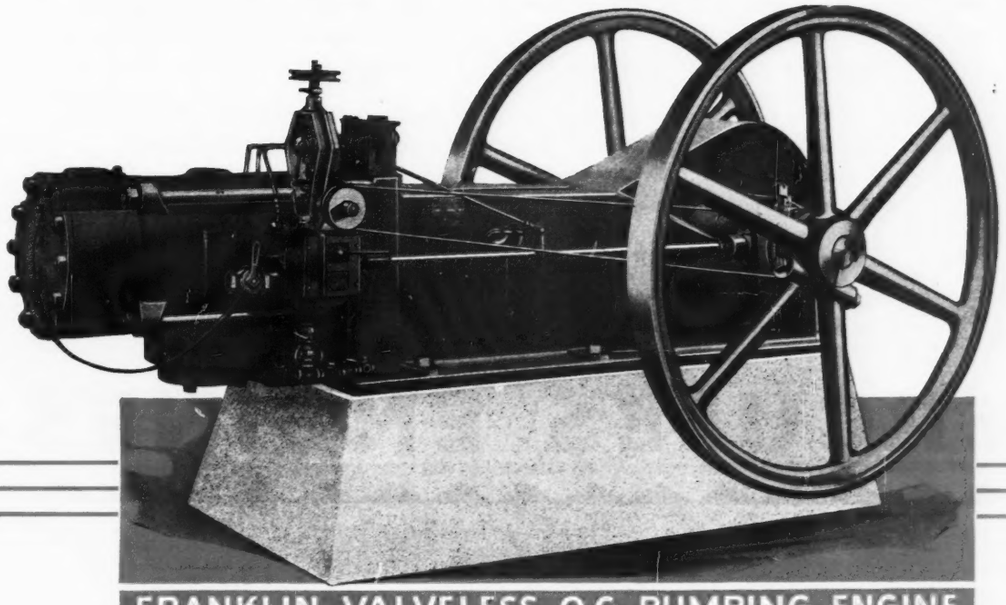
If you want to know the real worth of this Pumping Engine ask users or go into its design and construction, point for point—the O. F. Gas Pumping Engine is Franklin's answer to the demand of the oil industry for a better pumping engine.

This engine deserves your investigation.

FRANKLIN VALVELESS ENGINE COMPANY
FRANKLIN, PENNSYLVANIA

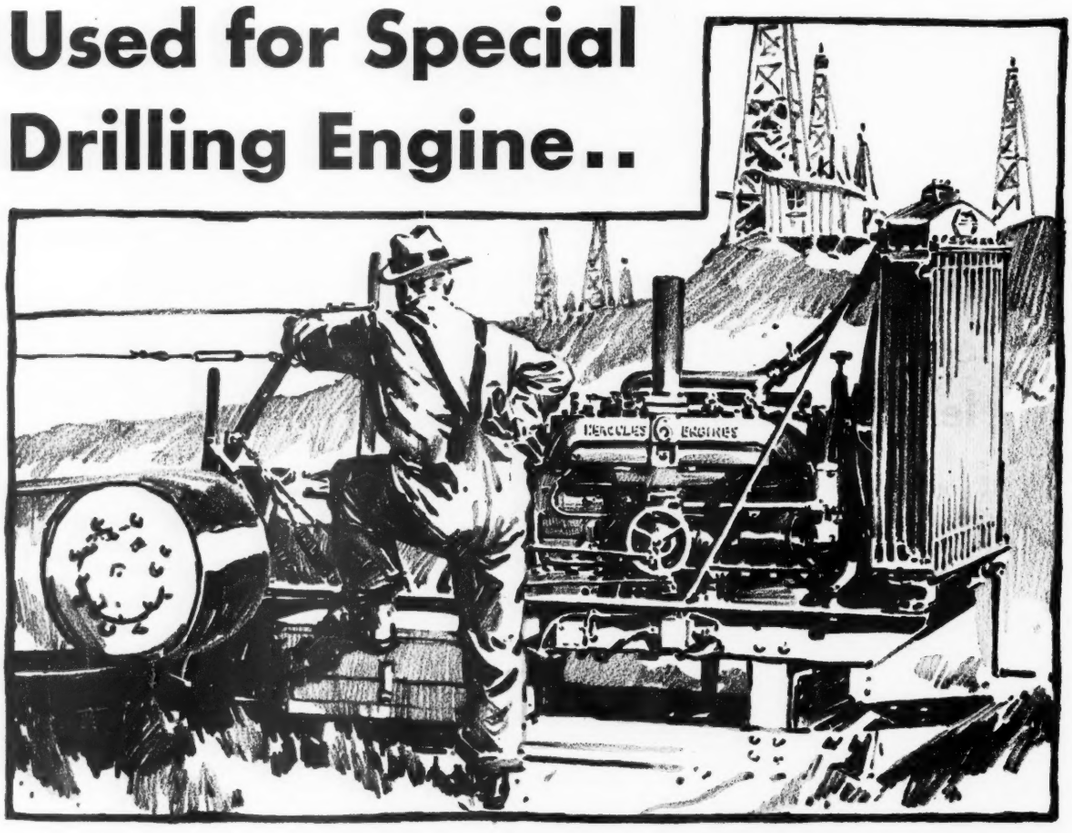
Distributed by

OIL WELL SUPPLY CO.



FRANKLIN VALVELESS O.G. PUMPING ENGINE

HERCULES SIX . . . . .
Used for Special Drilling Engine..



IN continuous use for more than 8 months, a Riise Drilling Engine—built by the Riise Engineering Company and designed around a Hercules Heavy-Duty Six—established a perfect record of service. During this period, 13 holes were drilled—the operating equivalent of over 100,000 miles of motor truck service—and yet it was not even found necessary to grind the valves!

Such thoroughbred performance is not unusual for Hercules-Powered equipment. Hercules Engines are designed and built to perform reliably and economically, no matter how difficult the job. On heavy-duty oil-field machinery, Hercules Power contributes always to uninterrupted, low-cost operation.

HERCULES MOTORS CORPORATION, CANTON, OHIO, U. S. A.

WEST COAST BRANCH: LOS ANGELES, CAL. MID-CONTINENT BRANCH: TULSA, OKLA.

Hercules Power Units and Parts are also carried in stock by the Norvell-Wilder Supply Company of Houston, Texas; Beaumont, Texas; Fort Worth, Texas and Shreveport, Louisiana and by Bovaird & Company of Bradford, Pennsylvania.

HERCULES ENGINES

INSLEY

Insley Speeds Up Pipe Laying

A Half-Yard Insley Shovel or Skimmer grading right-of-way in front of the trenching machine smooths the way for the trencher, gives more trench per day and therefore more pipe laid and backfilled per day.

The Half-Yard Insley is flexible—it gets over ground rapidly — gets out of tight places easily — handles a lot of dirt in a day's time — and permits the trencher to develop full speed.

Prominent pipe line contractors use Insleys with their trenching machines because they speed up pipe laying.

A Great Trench Excavating Combination:

INSLEY Half-Yard with PARSONS Ditcher

THE Parsons is outstanding in heavy duty, rugged construction, flexibility in digging speeds and adaptability to greatest variety of conditions. Ask for Parsons catalog.

N. E. C. LINES

KOEHRING
Pavers, Mixers; Power Shovels, Pull Shovels, Cranes, Draglines; Dumptors.

INSLEY
Excavators; Concrete Placing Equipment, Cars, Buckets, Derricks.

T. L. SMITH
Tilting and Non-tilting Mixers, Pavers, Weigh-Mix.

PARSONS
Trench Excavators, Backfillers.

C. H. & E.
Portable Saw Rigs, Pumps, Hoists, Material Elevators.

KWIK-MIX
Mixers: Concrete, Plaster and Mortar.

HANDLING the entire N. E. C. line, we are obligated to maintain a standard of localized service consistent with the national service-standard of N. E. C.! The scope of N. E. C. lines gives you all advantages of centralized buying.

Address nearest of these three:

LELAND EQUIPMENT CO.
Archer and Guthrie Sts.
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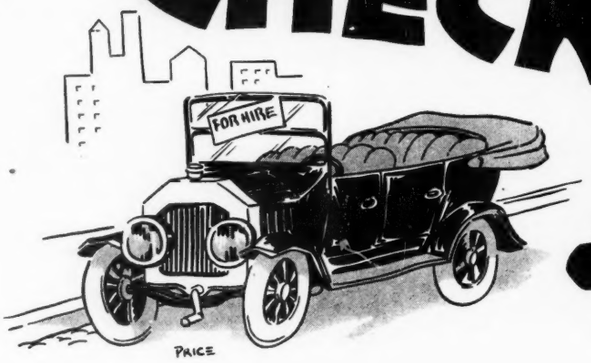
Telephones: 4-1114—L. D. 10

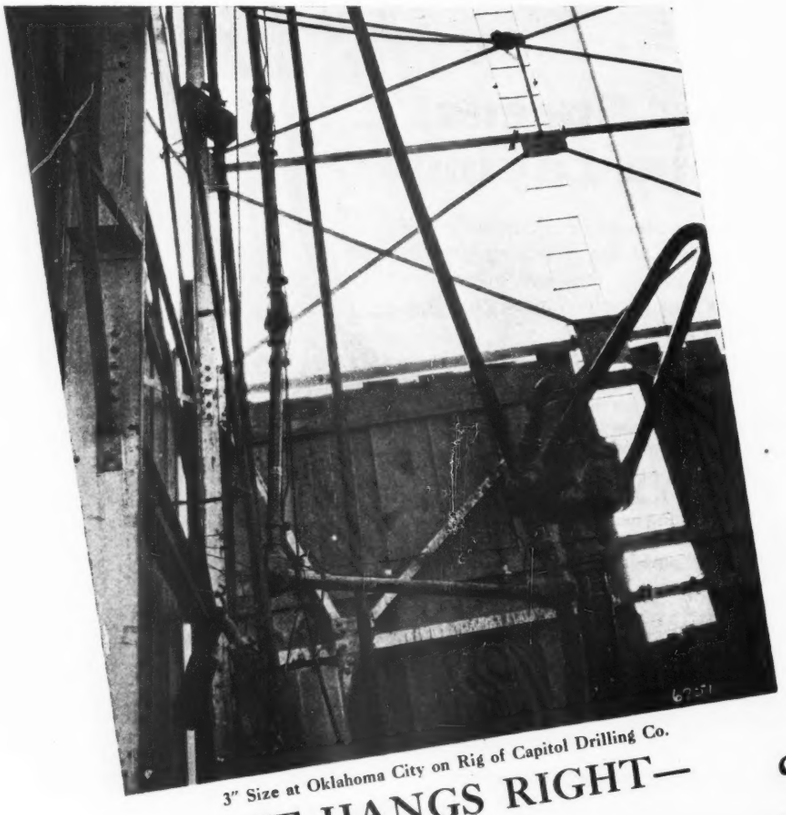
ALAMO IRON WORKS
Santa Clara and Montana Sts.
San Antonio, Texas
Telephone: Crockett 69

CLARK & BURROWS, Inc.
3600 Commerce St.
Dallas, Texas
Telephones: 87-2669—L. D. 558

A 5754-I-R

"CHECK AN' DOUBLE CHECK"!





3" Size at Oklahoma City on Rig of Capitol Drilling Co.

—IT HANGS RIGHT—

IN the language of Amos 'n' Andy, you can "check an' double check" on the experience of operators who have used Strong Steel Rotary Hose, and you will find that they pronounce it the best investment in rotary hose that they ever made—considering both increased drilling efficiency and economy.

IT HANGS RIGHT—HAS NO ELBOWS.

FLUID COURSE THROUGH IT SCIENTIFICALLY RIGHT.

SIMPLE.

SAFE.

Modesty forbids us from publishing all the nice things that users have written and told us about our Steel Hose. We will say, however, that we have never had a complaint about our hose, and have never been asked to take one back. In the beginning we put out more than a dozen on approval, two of them outside the United States, and all were accepted and paid for.

The STRONG

STRONG OIL TOOL CO.

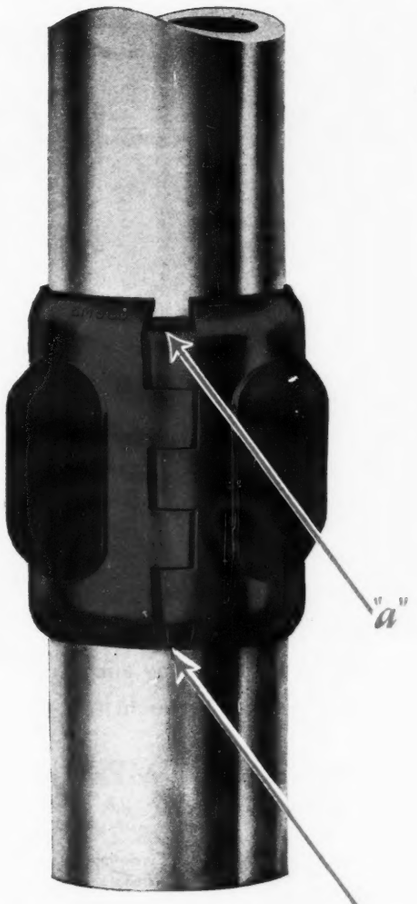
LOS ANGELES, CALIFORNIA

HOUSTON, TEXAS
Houston Oil Fields Material Co.

OKLAHOMA CITY
Wallace Mfg. Co.

NEW YORK CITY
American Steel Export Co.
535 Fifth Avenue

SEND FOR BOOKLET—"STORY OF STEEL HOSE"



Cannot SLIP, PILE, OVERLAP, or Snap off The Pipe

The Emsco method of locking on the pipe provides the tightest, firmest grip possible to obtain by mechanical means. The steel cage is drawn together by driving a tapered tooled-steel pin through slots so designed that the tremendous pressure obtained is precisely the same around the entire circumference of the pipe. The pin is provided with a slot (a), which fits over a corresponding rib in the steel cage when pin is driven into position, automatically locking the protector on the pipe under this enormous pressure. Another slot (b) is provided for breaking off pin after installation. . . . When the Emsco Protector is locked on the pipe in this manner, it is impossible for any pressure or blow to move it.

Emsco Protectors can be installed in 30 to 35 seconds. Place on pipe, drive pin into position and break off. To take off, merely straighten pin and tap out of slots.

Send for illustrated folder giving complete information regarding the Emsco Free-Circulation Protector — an engineering achievement in pipe protection.

E. M. SMITH COMPANY
637 So. Clarence St., Los Angeles, California

Distributed by
THE CONTINENTAL SUPPLY COMPANY
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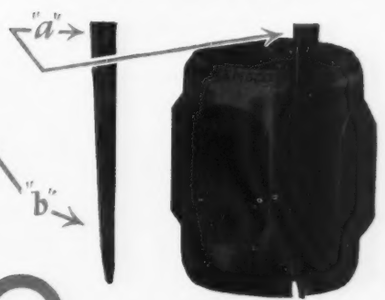
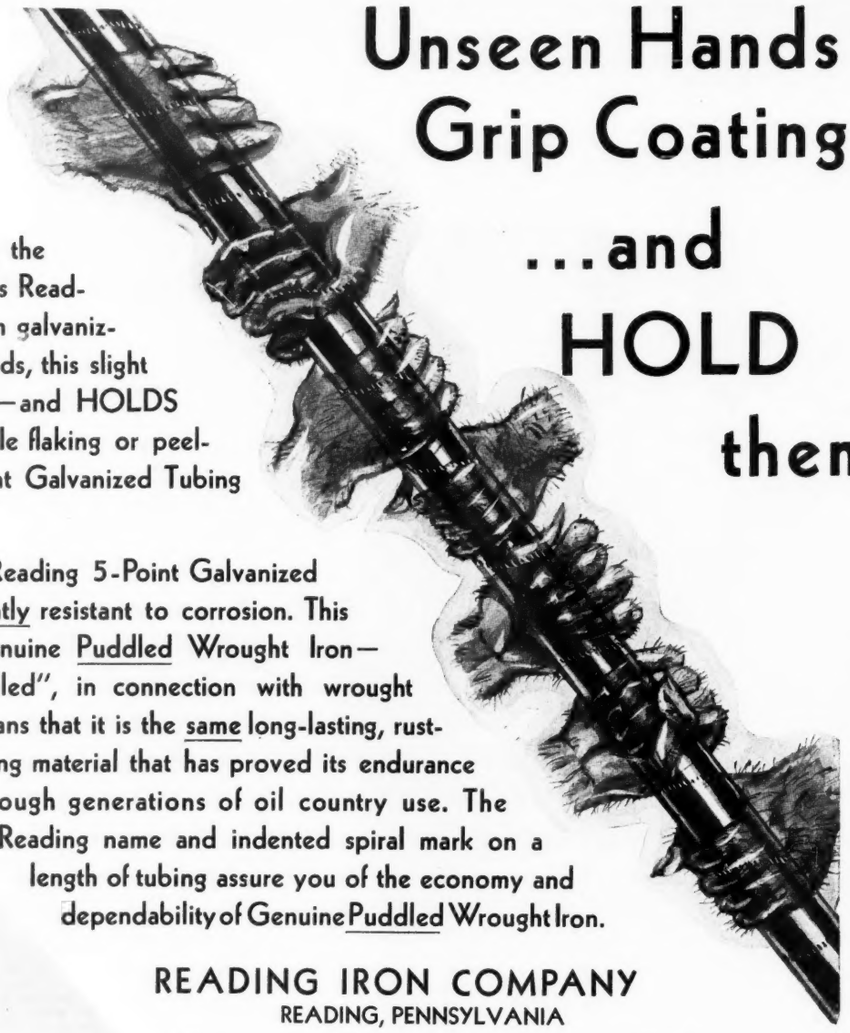


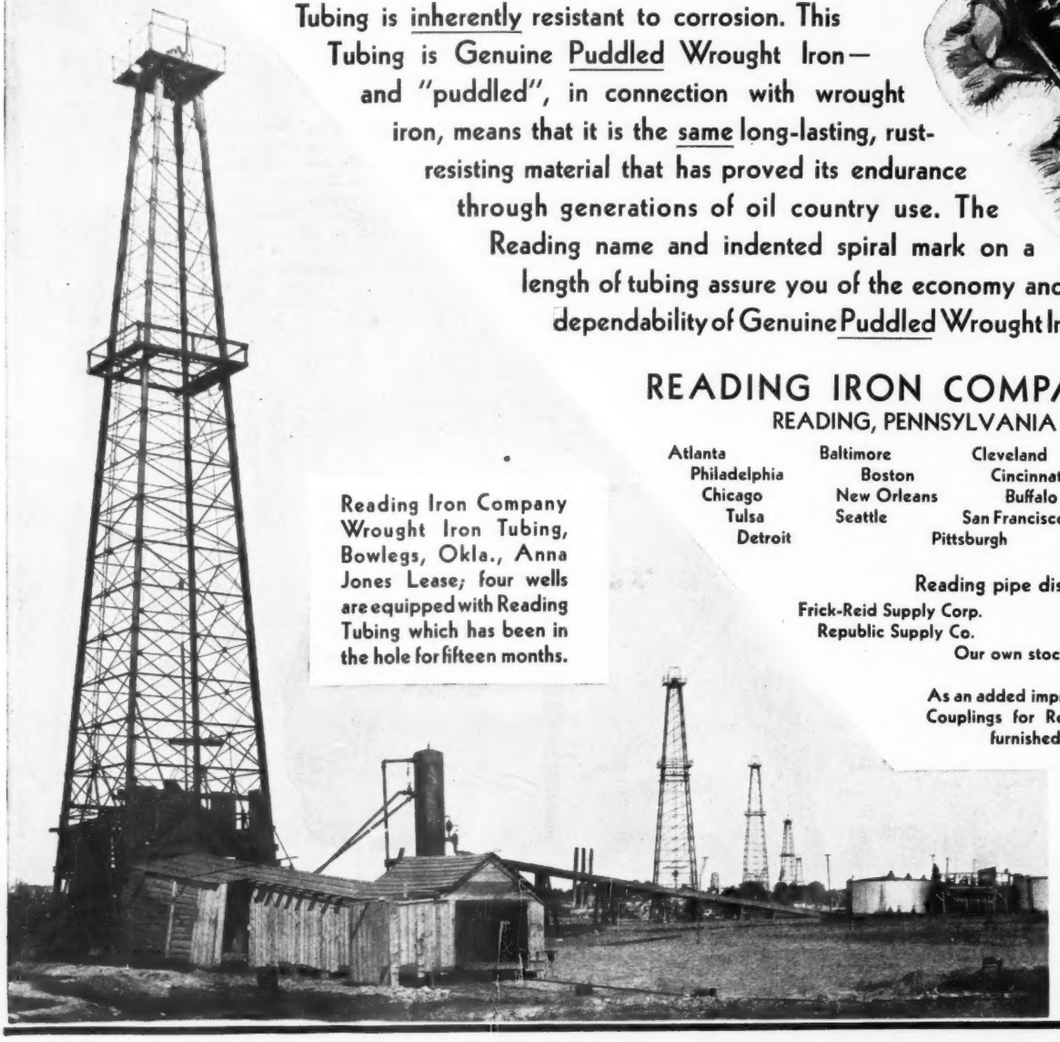
EMSCO Free-Circulation PROTECTORS

Unseen Hands Grip Coatings ...and HOLD them



UNDER a microscope, you can see the slightly roughened surface that gives Reading 5-Point Tubing its bulldog grip on galvanizing. With thousands of unseen hands, this slight roughness clutches the coating—and HOLDS it! That is why there is so little flaking or peeling where Reading 5-Point Galvanized Tubing is used.

Under its coating, Reading 5-Point Galvanized Tubing is inherently resistant to corrosion. This Tubing is Genuine Puddled Wrought Iron—and "puddled", in connection with wrought iron, means that it is the same long-lasting, rust-resisting material that has proved its endurance through generations of oil country use. The Reading name and indented spiral mark on a length of tubing assure you of the economy and dependability of Genuine Puddled Wrought Iron.



Reading Iron Company Wrought Iron Tubing, Bowlegs, Okla., Anna Jones Lease; four wells are equipped with Reading Tubing which has been in the hole for fifteen months.

READING IRON COMPANY

READING, PENNSYLVANIA

Atlanta, Philadelphia, Chicago, Tulsa, Detroit, Baltimore, Boston, New Orleans, Seattle, Cleveland, Cincinnati, Buffalo, San Francisco, Pittsburgh, New York, St. Louis, Houston, Los Angeles, Kansas City

Reading pipe distributed by:

Frick-Reid Supply Corp. Bradford Supply Co.
Republic Supply Co. Superior Tube Co.
Our own stocks at Houston, Texas

As an added improvement, all Reading Galvanized Couplings for Reading 5-Point Tubing are now furnished with galvanized threads.

5 POINT PIPE READING GENUINE PUDDLED WROUGHT IRON

DEFIES VIBRATION · RESISTS CORROSION · WELDS BETTER · HOLDS COATINGS · THREADS EASILY

GENUINE PUDDLED WROUGHT IRON

READING PIPE

DIAMETERS RANGING FROM ⅛ TO 20 INCHES

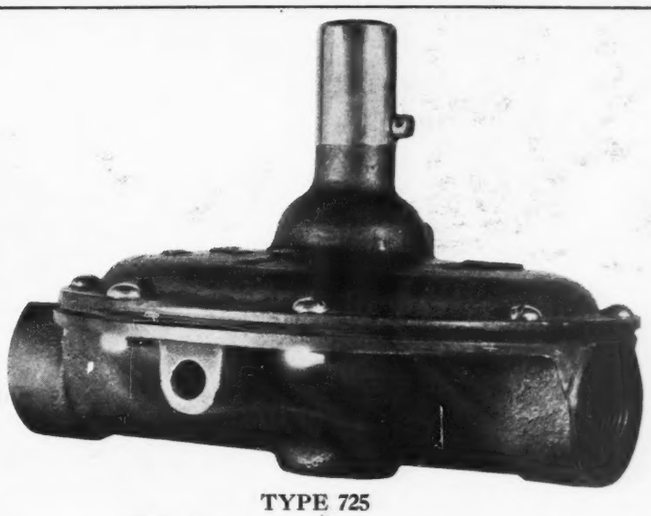
Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Wrought Iron

FISHER

HOUSE SERVICE REGULATORS

The FISHER LINE *for* . . SERVICE *every time*

Steam Pump Governors
[10 to 10,000 lbs.]
Boiler Feed Pumps
Fuel Oil Pumps
Vacuum Pumps
Receiver Tank Pumps
Pump By-Pass Valves
electric and power driven pumps
Reducing Valves, Pressure Regulators
for all pressures—liquids, gases, steam
Differential Pressure Regulators
Vacuum Regulators
Strainers
pipe, suction and drip pocket
Liquid Level Controllers
direct and remote type
Lever Valves
air, gas, or liquid
Float Valves
Fluid Mixers
Hydraulically Operated Valves
Relief Valves
Back Pressure Valves
Steam Traps—Air Traps—
Gasoline Traps—Grease Traps
Exhaust Heads
Steam and Oil Separators
Drip Pockets
Vapor Pressure Controllers
for oil storage tanks
Boiler Gas Fuel Governors
Gas Engine Fuel Regulators
Automatic Gas Relief Valves
Gas Pressure Regulators
main and house service
Liquefied Petroleum Gas Regulators
for gas cylinders
Gas Water Traps



TYPE 725

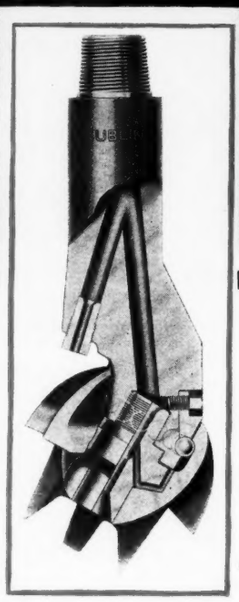
The Fisher Type 725 House Service Regulator is a new and improved reducing valve suitable for the reduction of pressure ranging from a maximum initial pressure of 300 pounds to any predetermined reduced pressure.

Type 725 may be fitted and trimmed to handle practically all gaseous liquids, at very attractive prices. Write for full information.

THE FISHER GOVERNOR COMPANY
900 Fisher Bldg.
Marshalltown, Iowa

HANLON-WATERS
INC.
General Offices : TULSA, OKLA. *Box 1404*
HOUSTON FORT WORTH

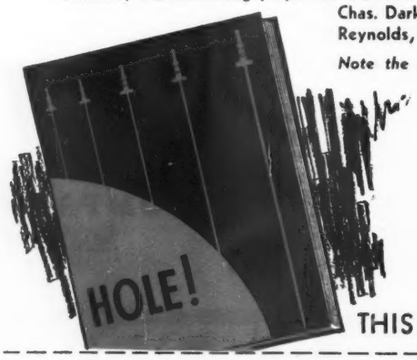
ZUBLIN BITS



...MAKING FRIENDS IN OKLAHOMA!

THESE two Oklahoma crews, running Zublin Bits, were snapped between tours at a rig of one of the Mid-Continents largest operators. Reading from left to right: Ray Lash, Universal Engineering Co.; Jewell Hedges, Driller; Victor Sanders, Driller; Chas. E. Latham, Fireman; Valree Rutledge, Pipe Racker; Harsey Orr, Pipe Racker; Ben Goza, Backupman; Chas. Dark, Fireman; T. A. Self, Backupman; Willie Reynolds, Derrickman; Albert Allen, Derrickman.

Note the different types of Zublin Interchangeable Cutters in the photograph.



UNIVERSAL ENGINEERING CO.

Manufacturers of ZUBLIN Oil Well Equipment

General Offices and Plant: 2369 East 51st St., LOS ANGELES
Mid-Continent Office: 429-30 Hightower Bldg., Oklahoma City
New York Export Office: 75 West St., William Braat, Manager

THIS BOOKLET MAILED TO YOU FREE OF CHARGE

Universal Engineering Company, 2369 East 51st St., Los Angeles, California
Gentlemen: Send me, with your compliments, my copy of "HOLE!"

Name_____ Position_____

Company_____ Address_____

SPECIAL ANGLITE DIAMOND-SUB METAL

Special Anglite can be successfully applied with electric arc as well as with the acetylene torch, and fuses very easily with both. It owes its perfect bonding qualities to a special alloying element used in its manufacture. Due to the fact that every piece of Special Anglite is free from surface oxides and scale, it gives off no harmful gases during application. Also because of its lower specific gravity, Special Anglite covers more bit surface per pound than other insert metals—it is the least expensive diamond-sub metal on the market. Write for prices and full particulars.

NATIONAL CASING PROTECTORS

National Casing Protectors prevent abrasive wear of drill pipe against casing and tend to eliminate fishing jobs, twist-offs, collapsed casing, and thin tool joints and collars. Once installed, National Protectors stay in place and last indefinitely. Write for complete information and prices.

National
TOOL & METALS, INC.

Division of
GLOBE OIL TOOLS CO.,
Torrance, Calif.

ASK ANY OPERATOR WHO HAS USED OXWELD

SOME welding operators express preference for other types of welding and cutting apparatus than Oxweld. These are seldom men who have actually used Oxweld blowpipes.

Once Oxweld blowpipes are used, the operator's preference is almost invariably established. It is possible for him to do faster, better work. The lightness and balance of Oxweld blowpipes cause less fatigue on long or heavy jobs. The precision of Oxweld flame control relieves the operator of an important operating adjustment.

Where Oxweld has been used, Oxweld is always preferred.

OXWELD
WELDING AND CUTTING APPARATUS AND SUPPLIES

OXWELD ACETYLENE COMPANY

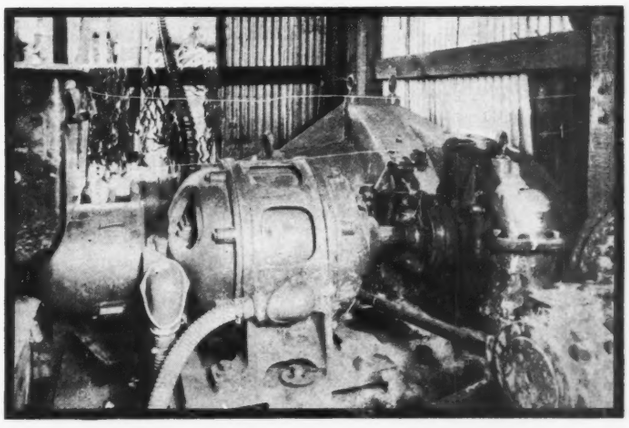
Unit of Union Carbide UCC *and Carbon Corporation*

NEW YORK

SALES OFFICES IN PRINCIPAL CITIES
IN CANADA: DOMINION OXYGEN CO., LTD., TORONTO

EVERYTHING ELECTRICAL FOR THE OIL FIELDS

They use MOTOR-DRIVEN pumps *at* SANTA FE SPRINGS



A 20/50-hp. Westinghouse gas-protected oil field motor, controller and OP double-reduction gear unit, pumping at Santa Fe Springs

ONE of the large producing companies at Santa Fe Springs is a firm believer in preparedness. Although a number of its wells are still on flush production, this company has, by installing Westinghouse motor drive on more than 150 wells, anticipated the day when the oil stops flowing freely.

About one quarter of these wells are already being pumped on the beam and, therefore, this company is now profiting by the advantages of the Westinghouse motor drive, consisting of an oil field motor, control and gear.

Among these advantages are:

Continuity of service
Compactness of driving unit
Close speed adjustment of pumping rate
Ample power and speed for cleaning and pulling
Low maintenance and attendance costs

Whether you have one or a thousand pumping wells, you can install Westinghouse motor drive with the assurance that it is the modern, economical and dependable oil field power.

SOLD BY

OIL WELL SUPPLY COMPANY

THE NATIONAL SUPPLY COMPANIES

Westinghouse

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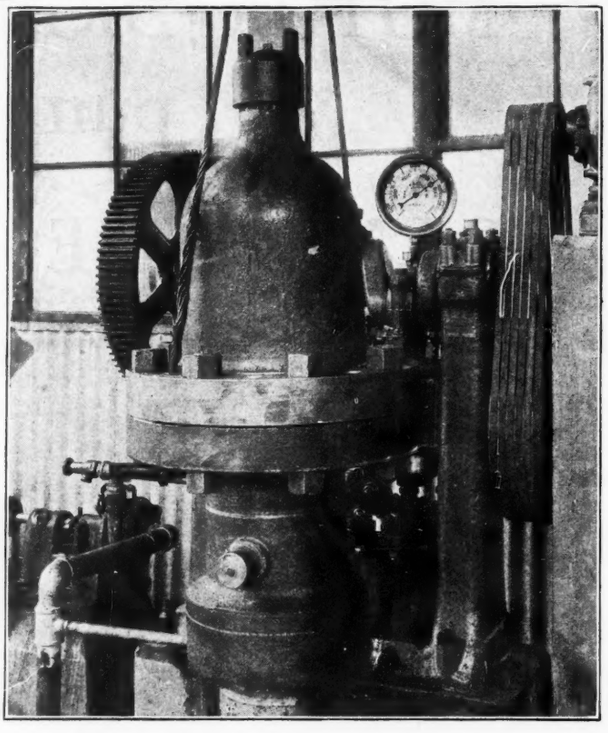
TUNE IN THE WESTINGHOUSE SALUTE OVER THE N. B. C. NATION-WIDE NETWORK EVERY TUESDAY AT 10:00 P. M., E. S. T.

TESTED TO 7,000 LBS.



A new guarantee of **SAFETY** for...

BAASH-ROSS PRESSURE FITTINGS!

NOW THAT gas pressures, too, are going to "new highs"... blowout preventers, tubing and packing heads, and all types of pressure control equipment must meet enormously increased demands...

And safety and dependability must be known in advance!

Hereafter all Baash-Ross equipment designed for high pressure control will be tested under any hydrostatic pressure required, up to 9,000 pounds, on a specially designed testing machine... shown above subjecting a Baash-Ross tubing head to 7,000 pounds pressure...

J&L PIPE B-R

24-hour field shop and supply service at

LONG BEACH • BREA
VENTURA • • TAFT
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BAASH-ROSS TOOL COMPANY

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District Offices. . . . . Houston, Texas . 1816 Nance Street
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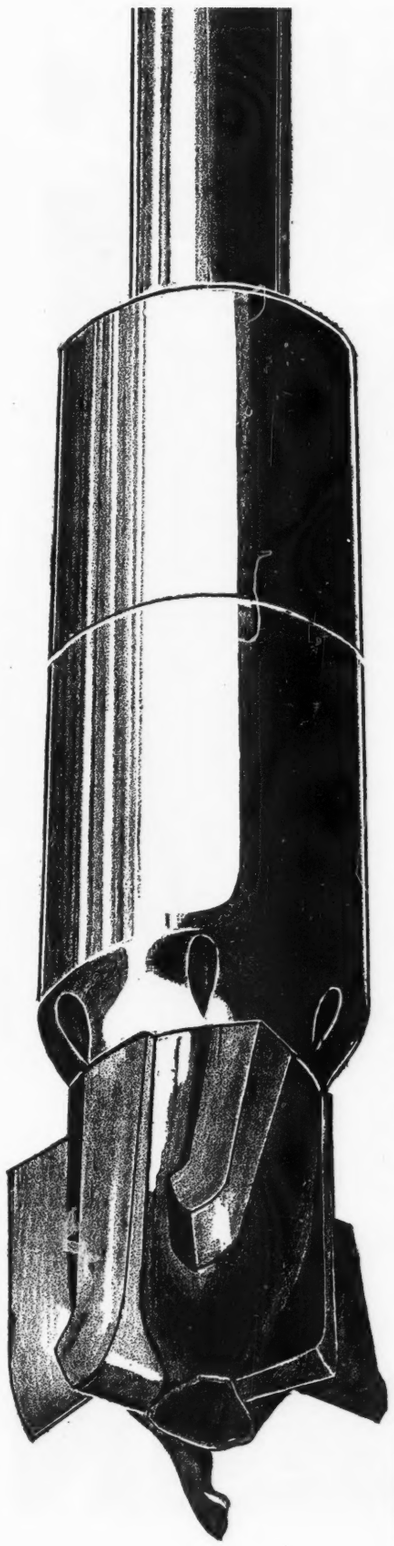
Oil and Gas Journal, May 15, 1930

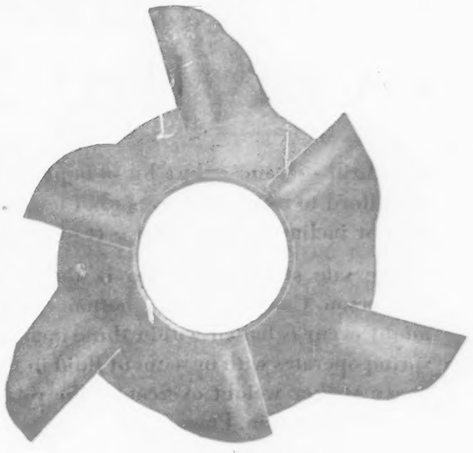


Break Costly HABITS

"No" habit whispers when a new, better and far more profitable coring tool is suggested. Habit says, "don't listen! Out-of-date methods are good enough."

Yet, *thousands* of operators are breaking old-fashioned and costly coring habits.

The Brewster Perfection Core Barrel is the reason. It guarantees a quick and true sample of the formation. Proven by 80% of the major companies in the Mid-Continent field, and users in foreign countries. Write today for catalog.



Ask about other Brewster A.P.I. Products

SPECIAL ROCK BITS; Shouldered Tool Joints; Drill Collars; Fish Tail and Special Gumbo Bits; Core Barrel Cutter Heads for both soft and hard formations—Cutter Heads for hard formations are faced with a substance of diamond-like hardness.

The Brewster COMPANY~INC.
SUCCESSOR TO INDUSTRY IRON WORKS INC.
Shreveport, Louisiana

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Suspending Tubing without a Catcher is like

Danqling Diamonds over the Sea

A thrill - - - and only a bit of byplay for those who can afford to take chances - - - but few of us are qualified or inclined to seek that sort of pleasure.

The safe string of tubing is the one that has a Guiberson Catcher at the bottom. Any drop that might occur is halted within three inches. The strong spring operates with or without fluid in the hole. The heavy striker weight overcomes the retarding action of mud or paraffin. Place a Guiberson Catcher in every well and enjoy safe going on your voyage to prosperity.

"Better Be Safe Than Sorry"
THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave., Los Angeles
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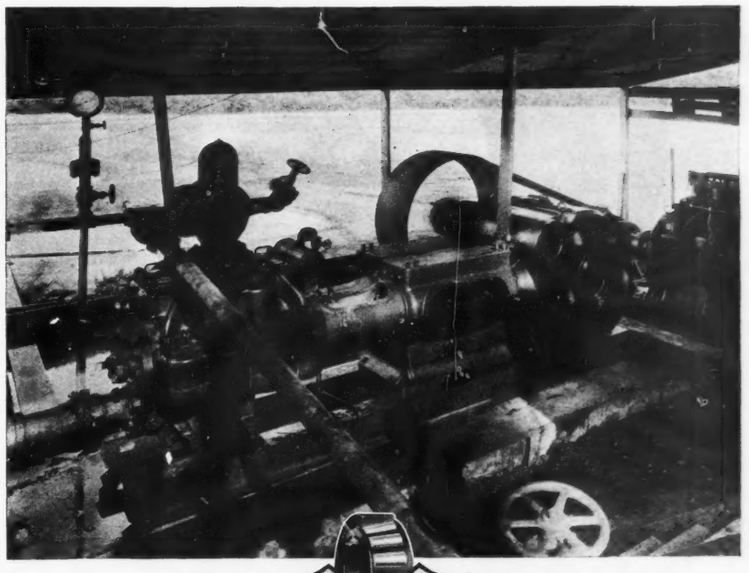
Fully Patented

GUIBERSON
BETTER BE SAFE THAN SORRY

Dependability



TIMKEN BEARING EQUIPPED

Dependability is the one quality that oil field equipment must have above all others. The Oil Well Supply Company has secured it for its 18 inch power driven slush pump by employing Timken Bearings at the vital points—the crank-shaft and pinion shaft.

As a result, sustained operation, fluctuating loads, or any of the normal or abnormal hardships of the work are powerless to affect the service given by the pumps. And as an additional advantage, there is a material saving in power consumption, and in all the items that make up operating cost.

Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS* and Timken-made steel form a foolproof, wear-proof combination that assures the permanency of these benefits.

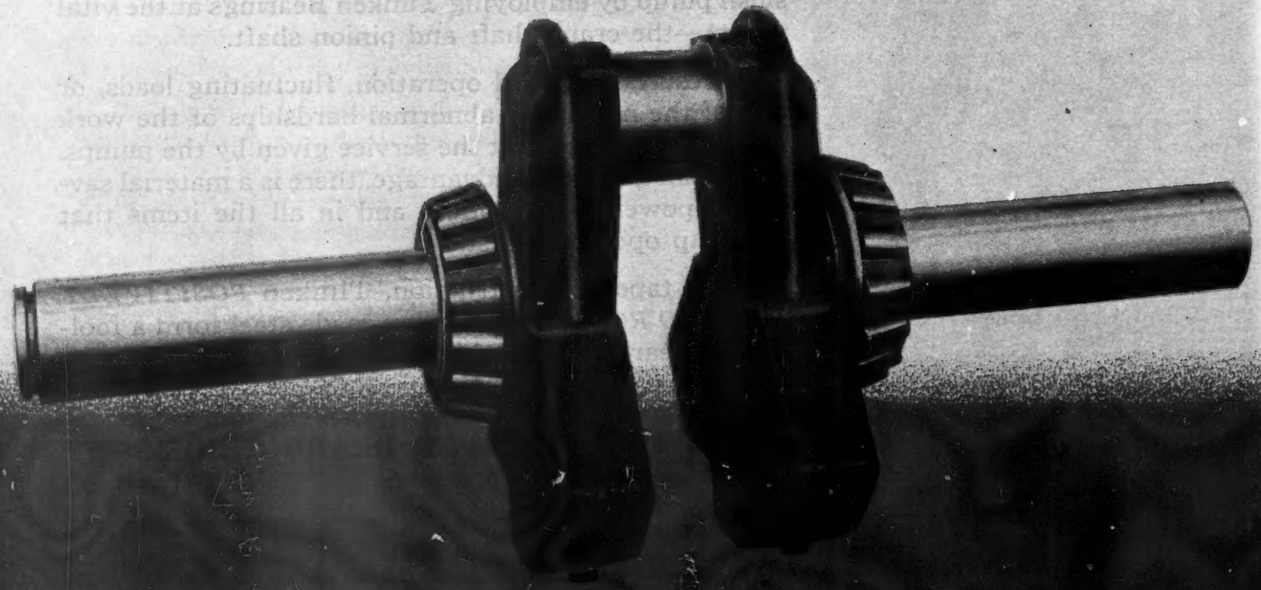
THE TIMKEN ROLLER BEARING COMPANY
CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

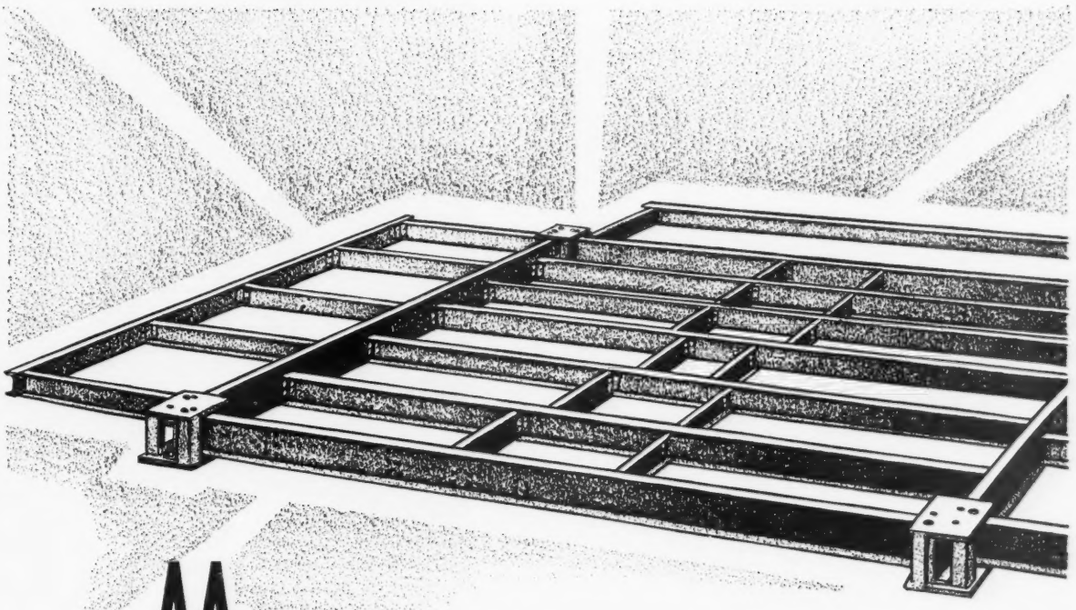
COOPER-

TOGAE

DIE-FORGED
OVERSIZE
CRANK-SHAFT



for leadership in pumping and drilling you're



Moore BASES & EXTENSIONS

AS GOOD AS THE CHAMPION DERRICK

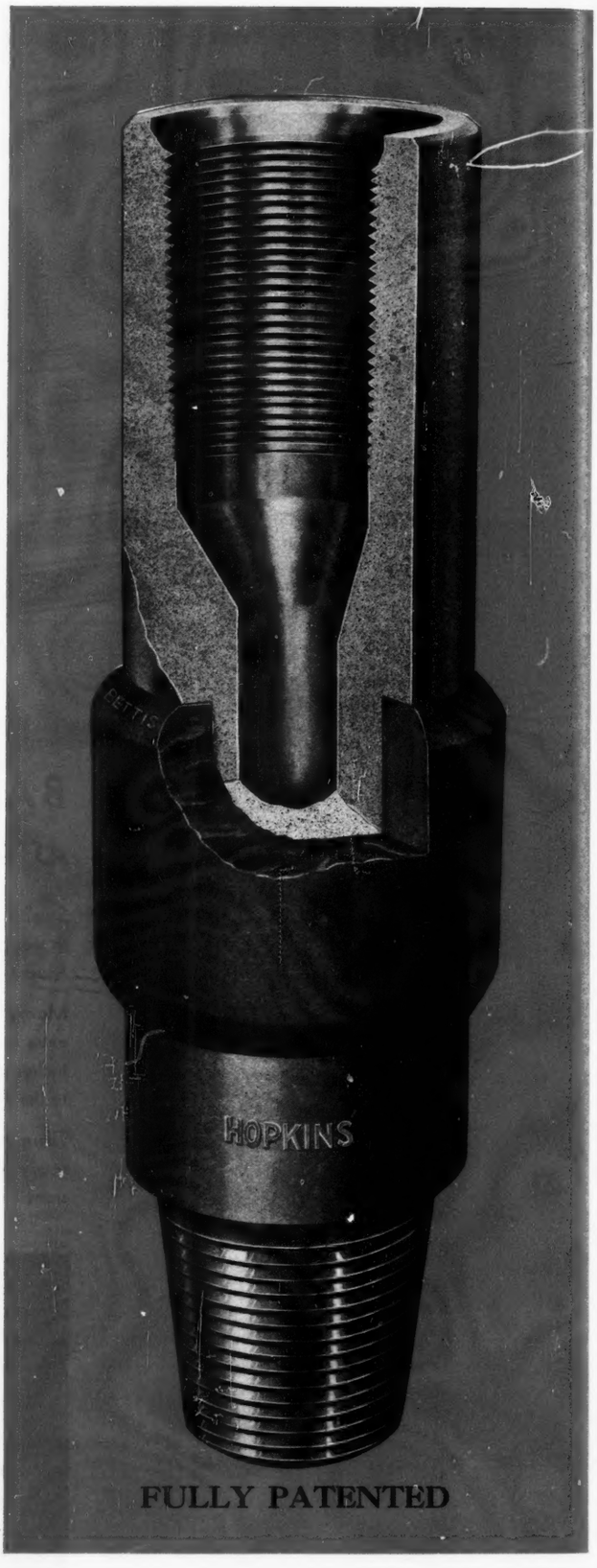
Steel derrick bases, set on concrete, supply durability and security not found in wooden construction. For heavy work, and where long life is expected, Moore Steel Bases and Extensions offer decided economy.

Moore Bases are made in several weights, from light pumping types up to extra heavy rotary drilling bases. A.P.I. standard sizes from 19 feet 1⅜ inches to 26 feet are supplied. Interior channel arrangements vary according to the application. Punching is A.P.I. standard.

There are steel extensions for dog house, forge shop, bull wheel house, rotary engine house and slush pump house. Moore Steel Bases and Extensions are shipped either galvanized or painted.

Moore
ALL STEEL RIG EQUIPMENT

LEE C. MOORE AND COMPANY, INC.
PITTSBURGH Established 1907 TULSA
New York Offices - Oilfield Equipment Company, 30 Church Street, New York, N. Y.
DALLAS, TEXAS WICHITA, KANSAS CASPER, WYO.
SHREVEPORT, LA. HOUSTON, TEXAS
Stocks in All Principal Fields



The toughest rubber the world has ever known STOPS metal-to-metal contact when you use Hopkins anti-friction Tool Joints and Couplings on your string. This certain protection is provided by the famous Bettis Protector. The protector grips the Joint and Coupling right at the point of closest contact. The rubber can never slip out because it is self-anchored in a groove. It has no seams—no hinges—no gadgets to cause trouble. The Bettis Protector will outlast the pipe!

. . . Hopkins *Anti-*

Can tell You in a minute

there is no delay in answering your inquiry or filling your order when it is placed with the Hercules Supply Company. A close touch with every detail enables us to know exactly at all times the progress of your order. You get instantaneous service from a compact organization.

[STORES *fully stocked with standard lines are located at convenient points in Texas and New Mexico.*]

HERCULES SUPPLY COMPANY

J·T·McCARTHY JR
EVERYTHING FOR OIL WELLS

Spang Jars
Worthington Pumps
B-J. Elevators and Tongs
Regan Control Heads, etc.
Standard Seamless and Etna Pipe
Cameron Blow-Out Preventers, etc.
Fishing Tools, both Rotary and Cable
American Steel & Wire Co. Wire Lines
"Lucey," "Dreadnaught," "Regan" Rotary Tools

Gray Tools
Climax Engines
Baker Oil Tool Products
Walworth Valves, Fittings
Penberthy and Chicago Injectors
American Bull Ropes and Cat Lines
Oil W. Imp. Control and Oil Savers
Guiberson Tubing Catchers, Swabs, etc.
Hughes Rock Bits, Gate Valves, Core Barrels

General Office: FORT WORTH

STORES: Pampa, Texas - Isom (Borger), Texas - Refugio, Texas
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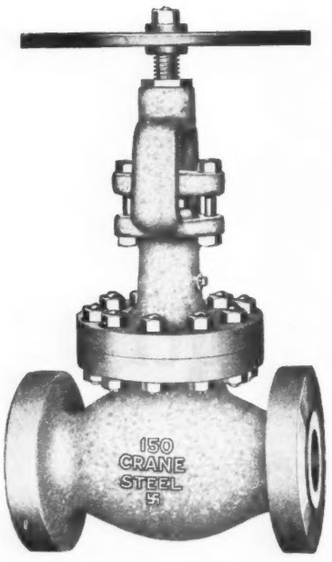
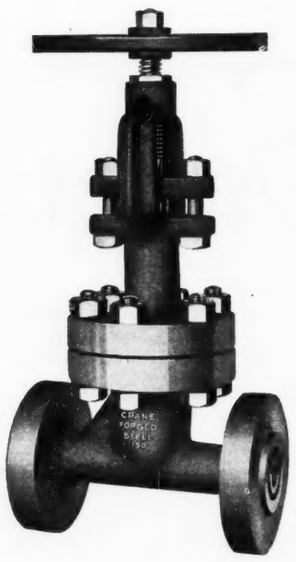
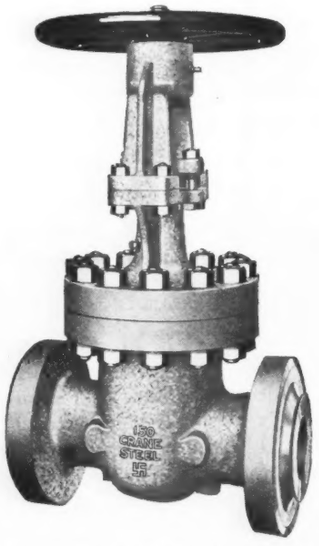


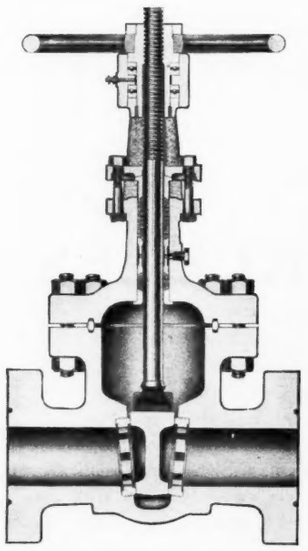
Series 150 Cast Steel Globe Valve No. 389 X. For hot oil pressures of 1350 lbs. at 900° F. Seat and disc of Exelloy.



Series 150 Forged Steel Globe Valve. For oil pressures up to 1350 lbs. at 900° F. Flanged ends. Seat and disc of Exelloy.



Series 150 Cast Steel Gate Valve No. 87 X. For oil pressures of 1350 lbs. at 900° F. Flanged ends. Seat and disc of Exelloy.



Cross section showing interior construction of a Special Series 150 Cast Steel Gate Valve for Oil Service. For 1350 lbs. at 900° F. Seat and disc of Exelloy.

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14½ X 7¼ X 20
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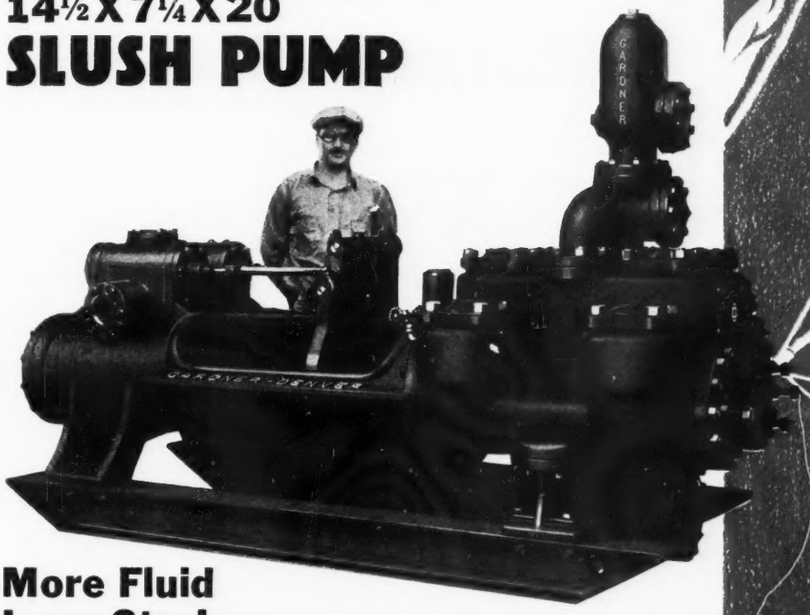

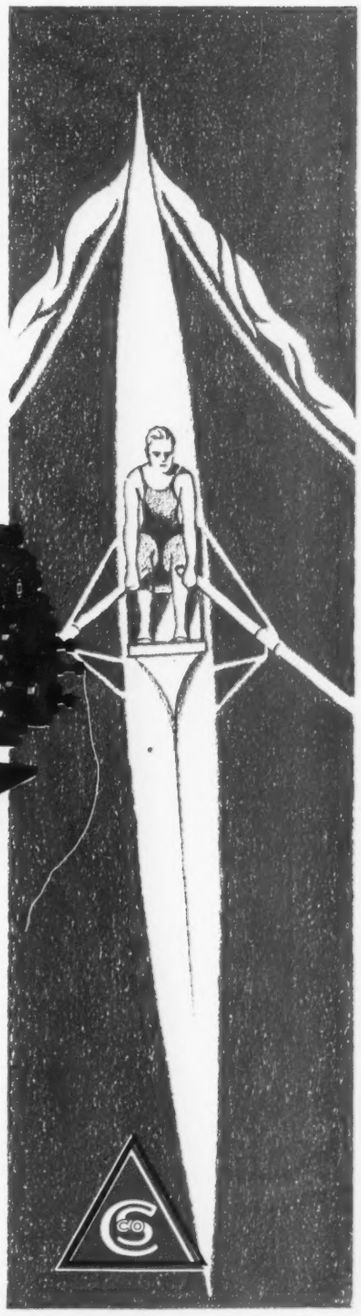

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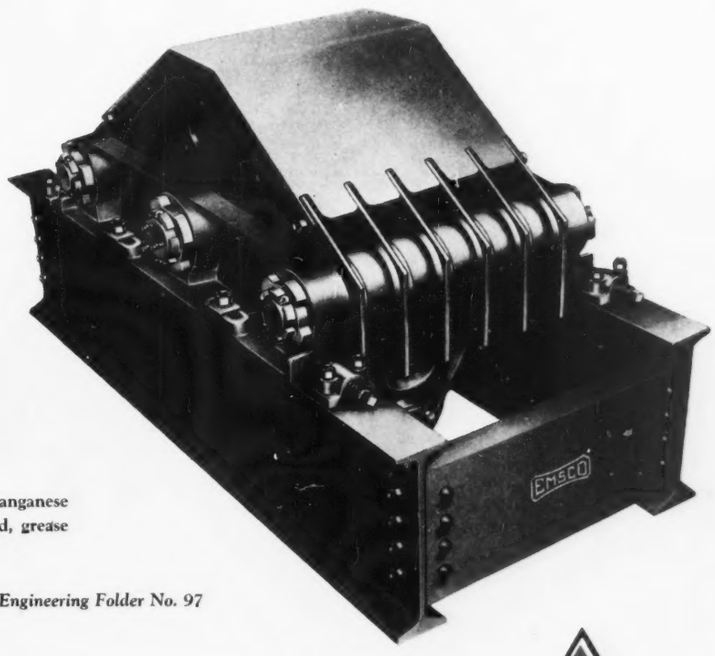

SPECIFICATIONS

20" - 65 lb. main base beams; 15" - 34 lb. channel spacers; 7" diameter Nickel-Chrome steel casing sheave shaft; 5" diameter S.A.E. 1035 Steel sheave spacer support pins; 5 - 36" Manganese steel casing line sheaves; 1¼" dia. S.A.E. 6135 steel hardened and ground rollers; 14" diameter Cat Line Sheave mounted on Hyatt Roller Bearings; Alemite Lubrication throughout.

Total weight complete with 5 - 36" manganese steel casing sheaves, catline sheave, guard, grease gun and fittings . . . . . 6130 lbs.

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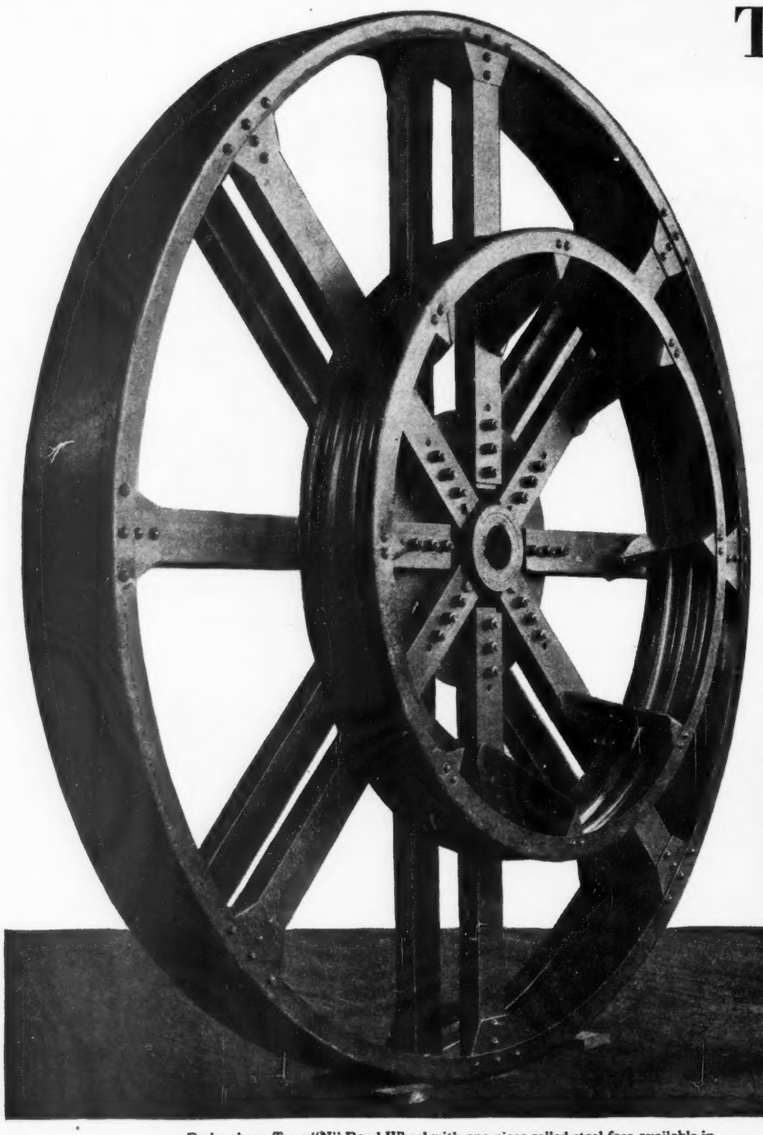

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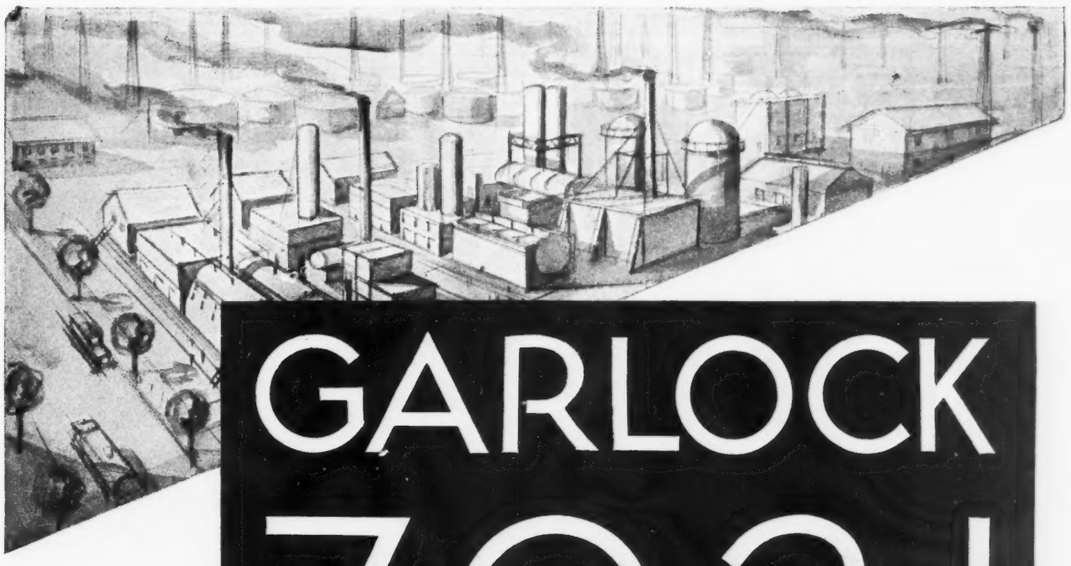

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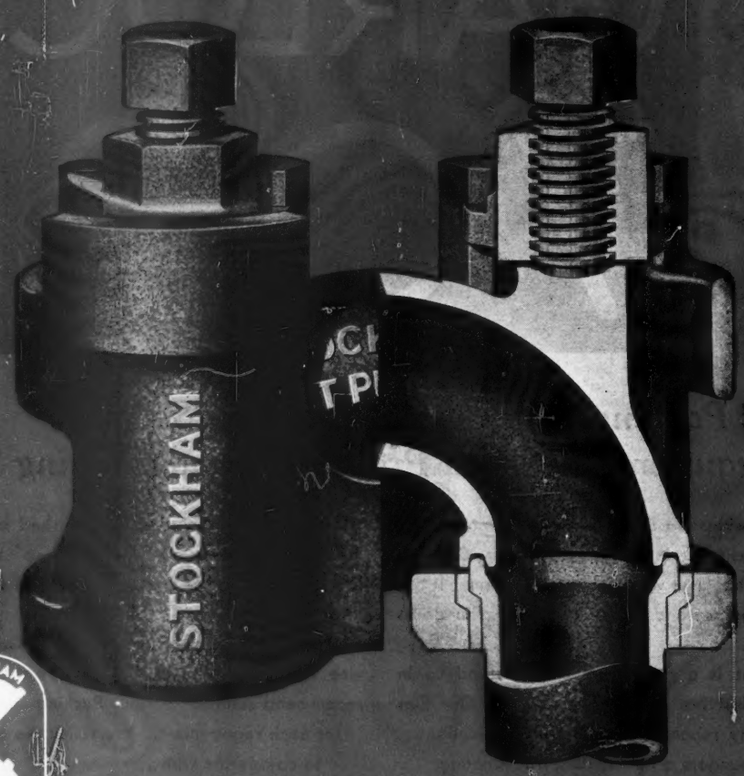

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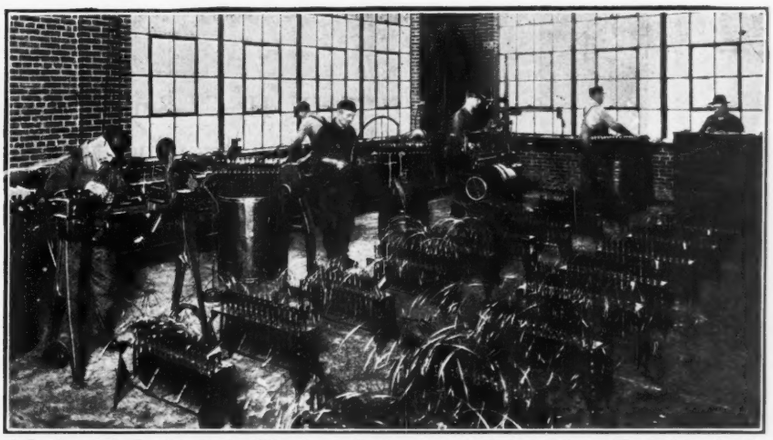
This construction covered by United States Patent No. 1,752,331. This device is also covered by foreign patents.

LESCHEN LINES



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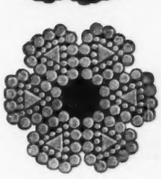

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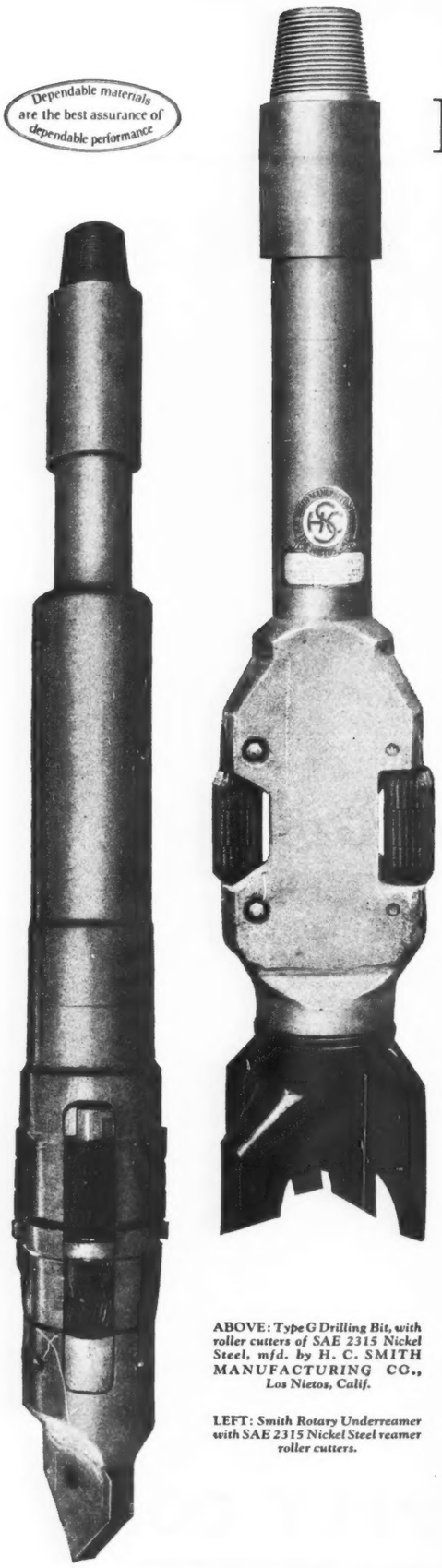

ABOVE: *Type G Drilling Bit, with roller cutters of SAE 2315 Nickel Steel, mfd. by* H. C. SMITH MANUFACTURING CO., *Los Nietos, Calif.*

LEFT: *Smith Rotary Underreamer with SAE 2315 Nickel Steel reamer roller cutters.*

Nickel Alloy Steel... "proved by far the most suitable material for roller cutters"

THE H. C. Smith Manufacturing Co. is widely known throughout the oil fields of the country as a manufacturer of high grade tools for the petroleum industry. As a result of wide experience in meeting the exacting requirements demanded of drilling equipment, this company has standardized upon 3½% Nickel Steel for the roller cutters in drilling bits and underreamers.

"These rollers are subjected to extreme shocks and are run against very hard formations at high speeds, and this Nickel Steel has proved by far the most suitable material from which to make these cutters", the company states.

Nickel Steel of the carburizing grades is especially well adapted to such applications, as it gives a uniform depth of case, providing adequate wear resistance, and assures a core with the inherent toughness required to resist shock and fatigue. In general, the superior combination of mechanical properties obtainable by the use of heat treated Nickel Alloy Steels has been well demonstrated in oil well equipment, as well as in tractors, airplane engines and other applications where toughness and dependability are primary requisites.

Detailed information on the properties and applications of Nickel Alloy Steels will be gladly furnished by our staff of engineers.

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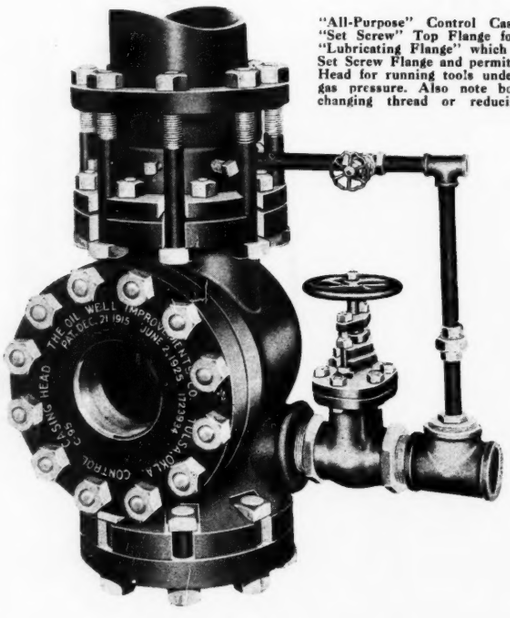
All-Purpose CONTROL HEAD Equipment

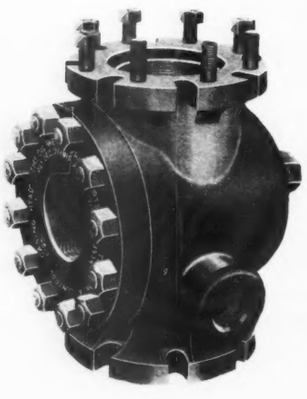


"All-Purpose" Control Casing Head with "Set Screw" Top Flange for oil saver and "Lubricating Flange" which is bolted above Set Screw Flange and permits use of Control Head for running tools under heavy flow or gas pressure. Also note bottom flange for changing thread or reducing casing size.

(Above) "All-Purpose" Control Casing Head with "Latch Assembly" Top Flange and without bottom flange for changing thread or casing size.

(Below) "All-Purpose" Control Casing Head with "Set Screw" Top Flange for Oil Saver and bottom flange for changing thread or casing size.

(Right) "All-Purpose" Control Casing Head without Top Flange for Oil Saver and without bottom flange for changing thread or casing size.



THE ALL-PURPOSE CONTROL HEAD is the one being used in Turner Valley, Alberta, and embodies every feature of the Type "X" Control Head which is standard equipment at Oklahoma City, Lovell, Big Lake, Yates Pool and other places. It enables the operator to have any type, size, or thread in control head construction from 9″ down, by having only one control head body and one oil saver, and by merely having the desired top and bottom flanges for changing the heads.

"All Purpose" heads up to and including 9″ o.d. are regularly oil-tested to 3000 lbs. pressure. Double by-pass outlets provide anchor lugs for securing head. Bottom of heads threaded to casing size and thread desired. Extra bottom flanges available for changing casing size or thread. Fittings for by-passing pressure to lubricating chamber as shown in above illustration not furnished by us. Use standard lease fittings.

Write for your copy of the O. W. I. Co. Temporary Catalog featuring All-Purpose and Type "X" Control Heads and Oil Savers.

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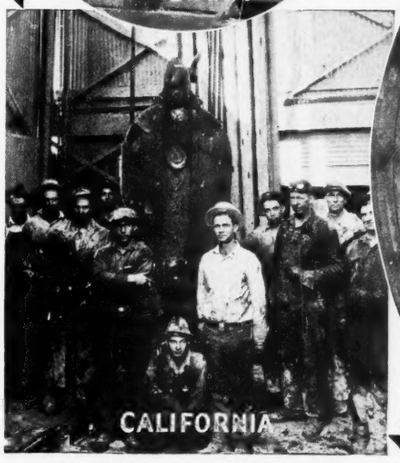
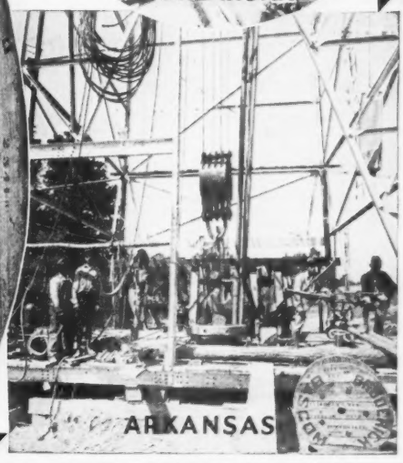
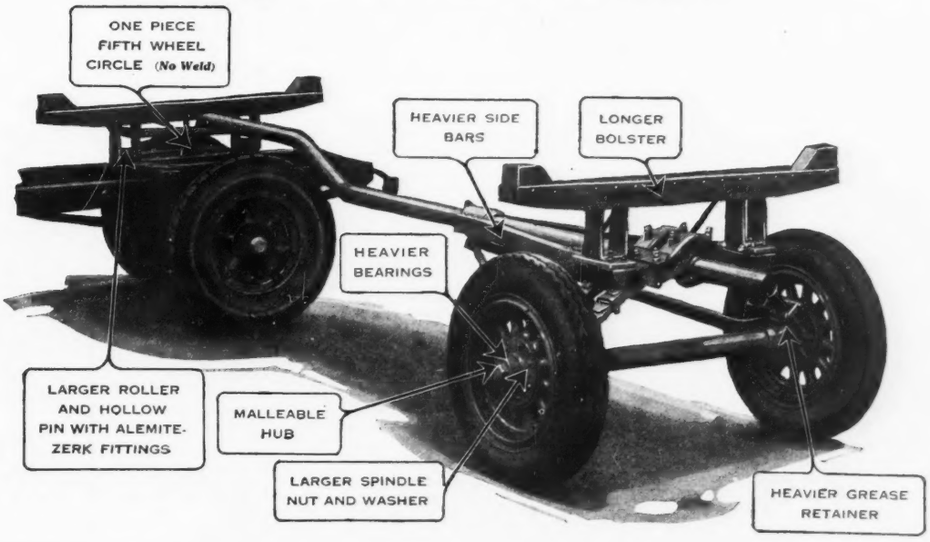




8 *New Reasons Why Kingham Trailers Are Always in Demand*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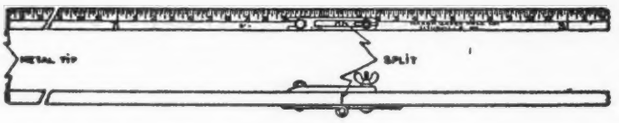

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EASTERN FIELDS

(Continued from Page 76)

Patterson has a duster at No. 35 on the Vernon-Donoho tract. In Harris district, Wood County, the Heck Oil Co. is drilling on the Washington Smith farm. In Union district, Pleasants County, L. C. White & Co. are drilling on the Frank Sellers farm. In Jefferson district, Martin & Kelly are drilling on the L. Cornell farm. In McKim district, H. L. Schultz has a duster on the W. H. Singleton farm. In the same district, C. F. Casper has a rig up on the George Reed farm.

On Little Cove Run, Troy district, Gilmer County, the Hope Natural Gas Co. has completed in the Big Injun sand a test on the Lydia S. Gillespie farm, estimated good for 15 bbls. On Elk River, Big Sandy district, Kanawha County, the Buff Lick Run Oil & Gas Co.'s second test on the Rebecca J. Young farm is a light gasser in the Big Injun sand.

On Poplar Branch of Leatherwood Creek, Big Sandy district, Kanawha County, the United Fuel Gas Co. has completed in the Weir sand No. 4,096 on the King Land Co.'s tract. It is dry. The location is 4,500 feet east of the same company's No. 3,971 on the S. D. Littlepage farm.

Test Wells Due and Starting

In Grant district, Jackson County, J. H. Starr & Co. are due in the sand on the J. H. Starr farm. In Center district, Calhoun County, the Hope Natural Gas Co. is building a rig on the F. B. Foster farm; the first rig was consumed by fire. In the same district, W. H. Bickel has made the location on the John D. Collins farm. In Sheridan district, Calhoun County, Ira Haught has shut down on the Alva Nider farm. In Union district, Upshur County, the Union Gas Corp. is due in the sand on the G. W. Simons farm. In Logan district, Logan County, the West Virginia Gas Corp. has made a location on the Din-Gess Run Coal Co.'s property. In Lincoln district, Marion County, the W. W. P. S. Co. has shut down for orders on the E. D. Toothman farm.

On Rush Run, Smithfield district, Roane County, the United Fuel Gas Co. has the rig completed for a second test on the John Hall farm. The location is 1,000 feet southeast of the Hardly Able Oil & Gas Co.'s test on the T. E. Nichols farm. On Parrish Fork, Clay district, Wirt County, D. P. Chenowith has a rig completed on the J. C. Hale farm. On Sugar Camp Run, Reedy district, Roane County, the Hope Construction & Refining Co. has a rig up for a second test on the Leonard Vandal farm. The location is 1,200 feet north of the test on the J. E. Watkins farm.

On Tanners Run, DeKalb district, Gilmer County, the McCall Drilling Co. has a rig up on the northeast corner of Riddle Brothers farm. In Proctor district, Wetzel County, Wade, Carney & Co. have started to drill on the C. M. Lemasters farm. In Skin Creek district, Lewis County, the Hope Natural Gas Co. is building a rig on the J. A. Caruthers farm. In Freemans Creek the Pittsburgh & West Virginia Gas Co. is hauling timbers to a location on the R. Davisson farm. In Troy district, Gilmer County, the same company has made a location on the Frank Drain farm.

SOUTHWEST PENNSYLVANIA

In Whitley Township, Greene County, the Carnegie Natural Gas Co. has a duster on the Enid Bowers farm. It has been abandoned. In Perry Township, the Equitable Gas Co. has a duster at No. 1 on the Stacy Stephens farm. In Greene Township, J. L. Garard has drilled No. 4 on the R. Olive Barb farm through the Dunkard sand. It is dry and abandoned.

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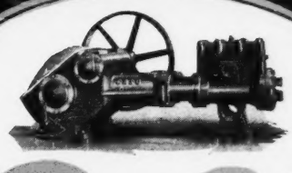
GASO PUMP & BURNER MFG. COMPANY

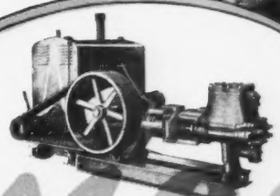
Tulsa, Okla.

Fort Worth, Texas New York, N. Y.



(*Left*) Gaso Fig. 1508 All Timken Bearing Pump. Interchangeable liners give capacities from 63 bbls. per hr. at 800 lbs. pressure to 250 bbls. at 250 lbs. Arranged for any type drive.

(*Right*) Gaso Pumping Unit with Fig. 710 Pump and V-Rope drive from Buda 85 H. P. Gas or Gasoline Engine. Capacities from 54 bbls. per hr. at 400 lbs. pressure to 500 bbls. at 300 lbs.



GASO PUMPS

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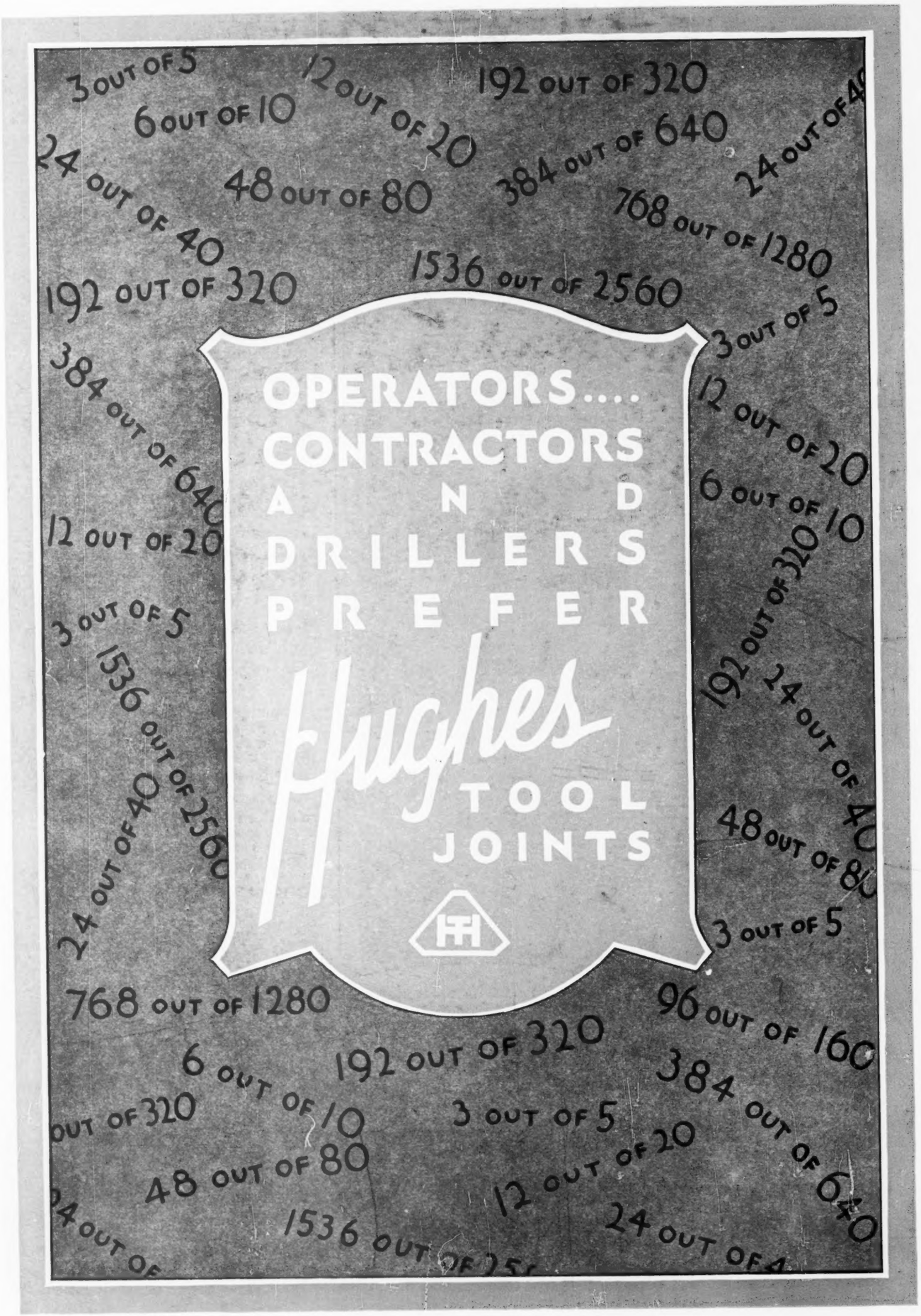
3 OUT OF 5
6 OUT OF 10
12 OUT OF 20
192 OUT OF 320
384 OUT OF 640
24 OUT OF 40
48 OUT OF 80
768 OUT OF 1280
1536 OUT OF 2560
OPERATORS....
CONTRACTORS
AND
DRILLERS
PREFER
Hughes
TOOL
JOINTS
96 OUT OF 160